

JOURNAL of the American Veterinary Medical Association

FORMERLY
AMERICAN VETERINARY REVIEW
(Original Official Organ U. S. Vet. Med. Assn.)

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EDUCATIONAL NUMBER

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April, 1924

No. 1

OUR EDUCATIONAL NUMBER

This issue of the JOURNAL is largely devoted to educational matters. The papers include those read before the Section on Education and Research, at the Montreal meeting, as well as several other notable contributions bearing on the subject of veterinary education inside and outside of college walls. We are publishing several committee reports which tie in very closely with the papers, particularly those of the Committee on Intelligence and Education and the Committee on the Prevention of the Transmissible Diseases of Animals.

When we use the word education, in connection with this number, we mean more than the instruction given, in class room, clinic and laboratory, to the veterinary student during his four years spent at a veterinary college. Experience has shown that the average veterinary graduate is not any too well equipped, upon the receipt of his diploma, to go forth and hold his own in the field with veterinarians who have received the greater part of their education after the day of their graduation. The young graduate has received merely the ground work, and in some of the papers in this issue will be found valuable suggestions for supplementing his college training and making himself a more

useful citizen in his chosen community. Dr. W. K. Lewis sizes up this phase of the situation just about right in his paper on "The Current Education of the Practitioner."

Carrying the subject of education still further, we are face to face with the urgent necessity of educating the public to make the best use of competent veterinary services. In the paper by Dr. A. N. Carroll, the problem is presented with suggestions for its solution. The state associations of Nebraska, Colorado and Kansas have gone on record as favoring vigorous publicity campaigns in behalf of the veterinary practitioner. Dr. Carroll strikes a keynote when he says that individual advertising is something not to be sanctioned. Advertising has been defined as what a person says about himself, and publicity as what others say about us. We have had some fine publicity the past year, and can well stand some more of the same kind.

We would direct particular attention to the address of Dr. R. M. Staley, President of the Pennsylvania State Veterinary Medical Association, delivered before one of the Philadelphia high schools and published in this issue. Dr. Staley is one of those broad-minded, fore-sighted veterinarians, who believes it to be our duty to maintain an adequate veterinary service by recruiting the right kind of young men into our ranks. If a young man decides not to study veterinary medicine, after looking the field over and comparing it with others, that is his privilege. There can be no objection to directing his attention to the possibilities of the veterinary profession.

Read what President Pearson told the veterinarians at Ames recently. We should see ourselves as others see us, just about once in every so often. It would be good for our souls. That the veterinarian of the future is to occupy a place different from that of the veterinarian of the past is clearly portrayed in the paper by Dr. Graham, who discusses, among other things, the county veterinarian movement. Dr. Graham gives us a very careful analysis of the situation as it exists today in the Central West.

On the whole we are well pleased with the group of papers constituting our educational number. We hope our pride is pardonable. We are aware that a situation confronts the profession. We must face it. We must work out a solution. We must do so without a single selfish motive. As Dr. Mayo says, in his paper on "Veterinary Service," if there is one among us who figures on making a fortune in the veterinary profession, he had better look for another job."

BUY A BOOK

It should hardly be necessary to enumerate the reasons why every veterinarian should keep his library up to date. During the past year we have reviewed, in the *JOURNAL*, no less than twenty new veterinary books. How many of these have *you* in *your* library? Do you know that during the past five years there have been more scientific books published in the United States, for veterinarians, than in any other country in the world?

In carrying out the plan of our educational number several publishers are running special advertisements in this issue. Look them over and decide to BUY A BOOK. Make these publishers believe that it paid them to use our *JOURNAL* as an advertising medium. No veterinarian can work at the maximum efficiency without the proper equipment. Good, authoritative text and reference books are just as much a part of his armamentarium as drugs or instruments.

Another point to keep in mind right now. Authors will not write and publishers will not undertake to print new books for us unless we buy the books already offered. In this respect ours is a very important part of the transaction. We want new books. We must have them. We repeat: Authors will not *write* new books, nor will publishers *print* them, unless we *buy* them. Therefore, BUY A BOOK.

STATE BOARD RECIPROCITY

Numerous suggestions and requests have been received during the past year for the A. V. M. A. to take the lead in an effort to extend reciprocity between state boards. Agreements are already in effect between some states, but a preliminary canvass would indicate that these reciprocity arrangements could be extended much further.

In some states the existing veterinary practice act is not so drawn as to permit of reciprocity. In such cases there is nothing that can be done until such laws are amended. Attempts to amend existing laws, which are, on the whole, working satisfactorily, are attended with some danger. Only too frequently the opportunity is taken to put over undesirable amendments at the same time.

Then, too, as an additional deterring factor, there have been instances of bad faith, where unfair advantage was taken of an

existing reciprocity agreement. Such instances have usually been the result of changes in the personnel of one of the boards, following a change in the political complexion of a state. This possibility, however, need not stand in the way of reciprocity agreements, if the recognition of the license of the one state is optional with the board of the other state, and not mandatory.

There are prominent veterinarians who believe that the time is at hand for discontinuing state board examinations. This is debatable. Others say that we still need some sort of a check on our veterinary colleges. Whether a state board examination is a proper check is also debatable. It is our opinion, however, that the time has long since passed, when a graduate of a reputable veterinary college, recognized by every existing authority, should have to submit to an examination every time he goes from one state to another. Here is the real need for reciprocity.

FOOT-AND-MOUTH DISEASE IN CALIFORNIA

After eight years of freedom from foot-and-mouth disease, the infection has again appeared in the United States, this time in the Oakland section of California. The diagnosis of this malady reached Washington on February 23 and it was soon determined to exist in three counties, viz., Alameda, Contra Costa, and Solano. Up to this writing there is no evidence that the infection exists elsewhere in California or any other State. The chief centers of infection are in Contra Costa County, in the general vicinity of Oakland and Berkeley.

Within an hour after the Department received information of the existence of foot-and-mouth disease, the Secretary of Agriculture issued an order quarantining the three counties above mentioned. Two days later six adjacent buffer counties were placed under close Federal and State quarantine as a precautionary measure. In addition the State placed several more counties under a provisional quarantine which has since been raised. Circular letters and other literature bearing on this disease, which had been prepared for such an emergency, were stamped with the date February 23 and immediately forwarded to California. Livestock sanitary officials and government inspectors throughout the country, especially west of the Mississippi River, were at once advised regarding this sudden outbreak of foot-and-mouth disease. In addition, radio stations cooperated with the Department in broadcasting warnings and

advising live stock owners to watch for the symptoms of the disease and to report any suspicious cases to either State or Federal officials.

The cause of the outbreak is unknown at present, but the infection is believed to have entered the country from the Orient by way of the San Francisco harbor. The first case of the disease has been traced to hogs whose owner had a contract with the Mare Island Navy Yard for the disposal of garbage from ships docking at that point.

As in previous outbreaks the policy of slaughtering infected herds was immediately adopted, this being the only certain method of safeguarding the Nation's eight billion dollar live stock industry from danger. Following the slaughter and burial of the infected animals the infected premises have been thoroughly cleaned and disinfected.

The Bureau has assigned to the work of control and eradication a force of 61 inspectors, all but nine of whom were selected because of their knowledge and experience in recognizing and combating the disease acquired in previous outbreaks. The Bureau forces are working under the direction of Dr. Rudolph Snyder, with offices at Oakland, California. The State also has a large force in the field, working under the direction of Mr. G. H. Hecke, Director of Agriculture, and Dr. J. P. Iverson, Chief of the State Bureau of Animal Industry. The forces are cooperating very effectively in the eradication of the infection and the great progress made in the short time that the work has been under way is proof of their ability and energy. The support of State and county officials, police officers, and numerous organizations has been 100%. Public spirited stockmen and citizens are cooperating with the guards at boundaries of infected counties and the danger of foot-and-mouth disease spreading from within the area is now remote. However, we do not permit ourselves to believe that the work is completed, but at this time we feel that the situation is well in hand.

At the close of March 16 a total of 102 herds or premises had become infected and 4017 cattle, 8127 hogs, 11 sheep, and 97 goats had been killed and buried. At the same time there remain two herds containing 361 cattle and 10 hogs awaiting slaughter and burial.

In most European countries foot-and-mouth disease has gained such a foothold that it has probably become a permanent infection. Great Britain has fought off many outbreaks and is now

engaged in one of its hardest fights to protect its live stock from the scourge which has already cost \$12,000,000. The United States has suffered six previous outbreaks and has succeeded in eradicating the disease on each occasion. The worst outbreak was in 1914, when the disease gained considerable headway before being recognized and a year and a half of strenuous effort was necessary to stamp it out.

J. R. M.

DR. HILTON APPOINTED

Dr. George Hilton has been appointed Veterinary Director-General of Canada, this responsible position having been vacant since the retirement of Dr. F. Torrance last year. For over twenty years Dr. Hilton has been Chief Veterinary Inspector, in the Department of Agriculture. Upon the retirement of his chief, Dr. Torrance, in 1923, Dr. Hilton was made acting Veter-



GEORGE HILTON, V. S.

inary Director-General. He has been a member of the Executive Board of the A. V. M. A. since 1918, representing District No. 1. (Canada.)

We join in the wish of Dr. Hilton's hosts of friends that he may have many more years of useful service to the live stock industry of Canada.

EXECUTIVE BOARD ELECTION

The polls for nominations in the Executive Board election, in District Number 4, closed on March 3, 1924. The election board, consisting of Drs. S. Brenton and E. P. Schaffter and the Secretary-Editor, certified to the following list of nominees as having received the highest number of votes.

Cary, Dr. C. A., Auburn, Ala.
Dimock, Dr. W. W., Lexington, Ky.
Houck, Dr. U. G., Washington, D. C.
Kiernan, Dr. J. A., Washington, D. C.
Mohler, Dr. J. R., Washington, D. C.
Richardson, Dr. A. G. G., Athens, Ga.

There was a tie for fifth place, which will explain why six names went on the election ballot which was mailed to every paid-up member in the District. Polls will close May 3, 1924.

DID YOU RECEIVE YOUR DIRECTORY?

During the past month we finished mailing the Membership Directory. A copy has been sent to each member for whom we had a correct address. Quite a few members have acknowledged receipt of their copies and it would appear that the decision of the Executive Board, to have a new edition printed this year, has struck the spot.

We have a suggestion to make. Take your Directory and see how many of the veterinarians in your immediate locality are listed as members. If there is some veterinarian near you, whose name you fail to find listed, get in touch with him, if he is a reputable practitioner, and urge him to join the Association. At the same time send his name and address to the Secretary.

BE KIND TO ANIMALS WEEK

President Coolidge has given his approval of observing the week beginning April 6 as "Be Kind to Animals Week." April 6 has been designated as "Humane Sunday."

In a letter to Dr. Francis H. Rowley, president of the Massachusetts Society for the Prevention of Cruelty to Animals, and the American Humane Education Society, President Coolidge said:

"I am glad to learn that the celebration of this week is becoming more and more an affair of national interest and concern.

The cause is one which thoroughly deserves all the consideration that can possibly be given it, and I hope that this year's will be the most wide-spread and general observance that has yet been held."

THANK YOU

We desire to thank the following members who have donated back numbers of the JOURNAL for our files: Dr. N. S. Mayo, of Chicago; Dr. L. A. Merillat, of Chicago; Dr. A. N. Towner, of Towners, N. Y.; Dr. M. E. Schwab, of Grand Forks, N. D.; Dr. E. G. Folsom, of Detroit, Mich.; Dr. D. H. Udall, of Ithaca, N. Y.; Dr. William Jopling, of Rose City, Mich.; and Dr. Geo. W. Rawson, of Detroit, Mich.

STATE BOARD EXAMINATIONS

Ohio Veterinary Examining Board. Columbus, Ohio. Apr. 7-8, 1924. Dr. F. A. Zimmer, Secretary, Dept. of Agri., Columbus, Ohio.

North Dakota Veterinary Examining Board. Apr. 9, 1924. Dr. R. E. Shigley, Secretary, Kenmare, No. Dak.

Alabama Veterinary Examining Board. Auburn, Ala. May 21-22, 1924. Dr. C. A. Cary, Secretary, Auburn, Ala.

COMING VETERINARY MEETINGS

Capitol Veterinary Medical Association. East Lansing, Mich. April 2, 1924. Dr. A. E. Erickson, Secretary, Charlotte, Mich.

New York City, Veterinary Medical Association of. Academy of Medicine, 17 W. 43rd St., New York City. Apr. 2, 1924.

D. C. G. Rohrer, Secretary, 40 W. 61st St., New York, N. Y.

Maine Veterinary Medical Association. Waterville, Maine. Apr. 7, 1924. Dr. P. R. Baird, Secretary, Waterville, Me.

Massachusetts Veterinary Association. American House, Boston, Mass. Apr. 30, 1924. Dr. C. H. Playdon, Secretary, Reading, Mass.

North Louisiana Veterinary Medical Association. Hospital, Dr. B. G. Bryson, Shreveport, La. May 14, 1924. Dr. L. H. Bennett, Secretary, Monroe, La.

Michigan State Veterinary Medical Association. East Lansing, Mich. June 24-25-26, 1924. Dr. E. K. Sales, Secretary, East Lansing, Mich.

Illinois State Veterinary Medical Association. St. Nicholas Hotel, Springfield, Ill. July 9-10, 1924. Dr. L. A. Merillat, Secretary, 1827 So. Wabash Ave., Chicago, Ill.

SOME PROBLEMS IN EDUCATION AND RESEARCH¹

By LEONARD W. GOSS, *Columbus, O.*

College of Veterinary Medicine, Ohio State University

This is the second meeting of the American Veterinary Medical Association since the origin of this section. The program of the former meeting contained some good papers from veterinarians who are doing research work, as has been indicated by the material presented. It is hoped that we will be able to develop this section into one of the largest of the Association, although we hear and read much which infers that this is a practitioners' association. There is no reason why the educators and investigators should not also meet and present their problems for discussion at the same time. Neither group can profit long without the aid of the other.

There are nearly 200 veterinarians in America who are connected with educational institutions. The most of these men are engaged in educational and investigational work. Each one should be interested in this section, and almost every one should present some of his work in this section from time to time. Much more benefit may be derived from the presentation of a paper before such a group, and its intelligent discussion, than from its mere publication. The latter seldom brings forth a discussion; consequently, many valuable and instructive matters are passed over without publication.

The success of this section depends upon the service it renders to the profession. This is dependent upon the interest and part which we take in its proper development. There is no doubt of the need of such a section, but, on the other hand, it has thus far been impossible to get some of the leaders of this phase of the work to take part in these meetings. It is hoped that the programs in the future will be stronger than ever and will appeal to a larger number of the profession.

The experiment stations of the United States are devoting about \$200,000.00 a year, exclusive of the salaries of the men concerned, to the investigation of diseases of animals. The results derived from such expenditures depend upon the ability of the men who are doing this work. Some of the stations have done some excellent work, with men who have had little training other than two, three, or four years of work in some one of

¹Presented at the sixtieth annual meeting of the American Veterinary Medical Association Montreal, Canada, August 27-31, 1923.

the veterinary colleges; consequently, it has taken many of these men some time to find themselves, during which time considerable research work has been overlooked. At the present time, institutions are demanding men who have done graduate work; consequently, they are men who have been tried. It, therefore, is conclusive with the latter condition that the discard will be less and the product of their labors will be of greater value.

The veterinary colleges are now in the best condition they have ever been in since their foundation. It is true that there is still room for improvement even in the best of them—and we say best because there is a great variation in quality. It is most probable that the number and quality of the members of the faculty of a college is the best index for judging its efficiency. Equipment is of considerable importance, but it can not be put to good use without a sufficient number of men who are well trained. The quality and quantity of the clinical material is of great importance, and its proper handling is of still greater consequence.

PHYSIOLOGY AND PATHOLOGY NEGLECTED

It is the writer's opinion that too little importance has been placed upon physiology and pathology by the larger number of the colleges. It has been drilled into the minds of the students that anatomy is the foundation for veterinary medicine. In some of the older schools, anatomy occupied a large part of the time in the curriculum. In those days, surgical work occupied a larger percentage of the practice than it does today.

With the great increase in the interchange of animals of high breeding from one place to another in the various parts of the United States, as well as the whole world, the infectious diseases have become more common; consequently, they claim a greater per cent of the veterinarians' attention than in the past; and, as the automobile has reduced the fast and heavy service upon the horse, it consequently needs less attention than formerly. These conditions have brought about a great change to the profession. The colleges, in most instances, have been awake to this fact, even more so than the practitioners; consequently, the instruction has been changed to meet the condition, and the men graduating today are well prepared to meet the present-day situation. This latter condition will be one of the greatest stimuli for more veterinary service, and will result in increasing the attendance in the colleges, as good service is always appreciated by the intelligent stock-owner.

The curricula of the colleges will still stand adjustments, as great variations are found when comparisons are made. A committee has been named to work upon this matter, and it is hoped that beneficial results may be attained.

There is a need for more enlightenment of the public with regard to the service which may be rendered by the veterinary profession. Practice is about the only one, of some 18 to 20 fields open to the young man who has been graduated from the veterinary college of today, of which he has but little if any knowledge. Of the students who enter college, we find by surveys that only 10 per cent of them intend to do other than practice. It is well known that only about 60 per cent actually enter or remain in that field; consequently, important parts of their collegiate work are considered more or less lightly, because it appears to be somewhat foreign to the field which they intend to enter, but into which they are thrown by force of circumstances.

INFORMATION FOR THE LAITY

There is, on the part of the general public, a great misconception of what medicine—human and veterinary—is capable of doing for the health of man, if they would only place their confidence in it and less in charlatanism. The American Medical Association is now publishing a lay journal, which is being put into the hands of boards of health for its educational effect upon the laity. It would appear that a similar publication from the American Veterinary Medical Association, which could be placed in the hands of the county agents, might be of great value to the live stock industry, and subsequently to the health and happiness of man.

One of the greatest handicaps to the profession is its lack of proper appreciation by the public. Such articles as have recently appeared in the *Breeders' Gazette* and the *Weekly Kansas City Star*, the *Columbus Dispatch* and the Philadelphia papers, will help to enlighten the public. Advantage should be taken of all opportunities for such publicity.

Most of our veterinary colleges are located at land-grant institutes which received funds for research work. This is a fortunate situation, as it provides an excellent opportunity for graduate work and the encouragement of the student to interest himself in the field of medical research. Medical researches and educational work will be supported as long as the public feel that they are being reimbursed by the prevention of disease.

The success of medicine depends upon the results of the researches and the ability of the teachers to present them in such a manner that practical and scientific results are achieved. In order to accomplish this, it is necessary to encourage high-class students to prepare themselves to enter this field. This is not a simple matter, as such a man will also make the most desirable practitioner, and he is also led into the latter because it offers greater remuneration in the earlier years.

FELLOWSHIPS NEEDED

The one to three years of graduate work necessary for the entrance into the technical field must be done upon a very small income or at the total expense of the individual. If we are to encourage such men to prepare themselves for research, we must lend every effort for better support in the form of fellowships. This condition has been encountered in human medicine, and has been met by the General Education Board and the Rockefeller Foundation. They have jointly set aside a fund of \$100,000.00 a year, for a period of five years. This has been turned over to a committee of the National Research Council to be used for teaching-fellowships to graduates of medicine or to men of equal training. These fellowships are being given to the men who desire to follow the science of medicine, and not to medicine and surgery, as these latter fields, as in our own profession, are comparatively well filled. The writer has made an effort to interest certain large commercial concerns, which are taking considerable interest in animal disease control work, in providing for one or more fellowships in veterinary medicine. This has resulted in an expression of their desire to provide for fellowships in the future.

This matter has also been taken up with pure-bred associations. While they have only small funds and feel unable to do anything in a financial way, they have in some states already given considerable moral support to the contribution of funds for research. There is no doubt that they will be of greater assistance for the maintenance of research in animal diseases than any one other factor. There should be from ten to fifteen graduate students in attendance at the veterinary colleges each year for the next twenty years. As a matter of fact, there have been considerably fewer than that number in the past few years, and one-half of these are Federal Board students. We as educators must continually keep research in the foreground. It is not necessary to have large funds in order to search for

truth. In nearly every problem there are important phases which require a very small financial outlay in order to carry on the work. Such things may be done when there is little financial backing. Often the results are of such importance that they draw forth assistance for bigger things. On the other hand, it is hoped that the stations which have large sums will conduct the work which requires the purchase and maintenance of larger animals.

Workers upon a project should be in conference once or twice a year. This would aid greatly in clearing up irregularities and would avoid considerable duplication of work. Cooperation is the keynote to the greatest success. Every teacher of veterinary medicine should be doing some research work; there are few who are so engrossed with their teaching but that they could find the time to do some work. We must all turn our hands to some productive work.

Few of us feel that there is any less to be done now than there seemed to be twenty years ago, as each new thing brings with it additional problems and the suggestion for others. The work recently done on insulin is only one of the old problems which has only recently been worked out. We never need fear of exhausting the problems for medical research as long as man and animals exist. At the present time, researches in the diseases of cattle and chickens are probably receiving the most attention. It is well that they should, as the losses from such diseases have been taking a large annual toll.

The urgent demand for publications from the research worker by the directors of research staffs is due to his desire to make a showing. This one thing may work an injury to research by hasty publication, or it may result in the mere publication of compiled material in the form of bulletins, which can not be considered as research but the dissemination of information. Each worker will have to consider his individual case and work to the best of his ability to achieve the most that is possible under his circumstances. Never become so engrossed in the problem that the source of funds is entirely lost from sight.

It is to be hoped that the directors of research will be chosen from the group of research workers and that they will be men who are practical and will have the ability to direct the work so that the highest class of research will be attained, and that the public will be able to appreciate it, and will show its appreciation by its liberal moral and financial support.

THE TEACHING OF VETERINARY SCIENCE IN THE PROVINCE OF QUEBEC¹

By F. T. DAUBIGNY, *Montreal, Canada*

Director of the School of Veterinary Medicine of the University of Montreal

It was on May 29, 1866, that, on the motion of J. X. Perreault, the then member of the Provincial Parliament for the county of Richelieu, editor of *La Revue Agricole* and of *The Canadian Agriculturist*, official organs of the Chamber of Agriculture of Lower Canada (now the Province of Quebec), that the following resolutions were adopted by this Chamber:

"That a sum of three hundred dollars be voted for the foundation of a veterinary school in Montreal, this school to be under the auspices of the Chamber of Agriculture of Lower Canada;

"That Mr. Duncan McEachran, a graduate veterinarian of Edinburgh and London, be appointed a professor at this veterinary school."

Several discussion with Mr. McEachran had given the assurance of the help of this distinguished veterinarian towards the foundation of the veterinary school of Montreal on the conditions of the aforementioned resolutions.

Certified correct:

(Signed) Georges Leclerc,
Secretary

Chamber of Agriculture
Province of Quebec

(Signed) J. X. Perreault,
Deputy for Richelieu

In that year 1866 the Chamber was constituted as follows:

Major T. E. Campbell, president; Honorable J. M. Tessier, vice-president; Georges Leclerc, secretary; Director General: J. X. Perreault, deputy for Richelieu, a graduate of the Imperial Agricultural School of Grignon, France, and of the Royal Agricultural College of Cirencester, Gloucestershire, England, editor of *La Revue Agricole* and of *The Canadian Agriculturist*; member of the Imperial Zoological and Acclimatation Society of Paris.

Do I need dwell, Mr. Chairman, upon the unselfishness of men who undertook to keep a veterinary school in a state of action, for the sum of three hundred dollars, and is it necessary

¹Presented at the sixtieth annual meeting of the American Veterinary Medical Association, Montreal, Canada, August 27-31, 1923.

to point out to the younger generation of today that their annual supplementary budget of from fifty to one hundred thousand dollars a year would have looked mighty good then as a working capital?

However, the first lectures at this veterinary college were given either at the end of September or at the beginning of October, 1866, and the program was confined to lectures in agriculture, agricultural chemistry, zoology, botany, physics, anatomy and pathology.

It is not within the scope of this paper to tell you a bit of history of the McGill veterinary faculty. I just want to mention the fact that the founder of the College, its first and only dean, was Dr. Duncan McEachran, F.R.C.V.S., assistant to Professor Andrew Smith at the Ontario Veterinary College, Toronto. Dr. McEachran was Professor of *Materia Medica* at Toronto in 1865. He soon received the cooperation of the McGill University, when acting upon the suggestions of the Chamber of Agriculture, and agreed, as had been foreseen by the members, to found the veterinary college.

THE FIRST GRADUATES

In the year 1869 two students were on the graduate list of the College, which was established at the corner of Craig and Bleury Sts., Montreal: C. J. Alloway and W. Patterson, the first M.C.V.S. But the number of students was soon to increase to phenomenal size, and, with a large part of them coming from the United States, its fame was soon to expand to all parts of the continent.

What an undertaking it must have been to buck up against the quack! And what about trying to establish veterinary science on the pedestal where it was placed!

Among the first graduates of the Montreal Veterinary College were a few Canadians of French extraction, and it may be said that the teaching of veterinary science in the Province of Quebec originated here. In 1872, Dr. O. Bruneau graduated; in 1873, J. A. Couture, both becoming the first lecturers in French, together with Dr. Georges Leclerc.

Fostering this idea of the French lectures and desirous of increasing the number of French students, the local Government soon saw fit to take steps to increase the number of lectures, the number of subjects taught and the number of professors.

In 1879, Dr. V. T. Daubigny graduated with honors, and was awarded the Montreal Veterinary College Medal for proficiency. Dr. McEachran finding Dr. Daubigny a man of high culture, appointed him head of the French Department of the College, which means that, during five years, he combined the positions of Professor of Comparative Anatomy, Dissection, Veterinary Medicine and Surgery and *Materia Medica*. The other professors were: L. B. Durocher, M.D., in botany and zoology; T. E. D'Orsonnens, M.D., in chemistry; and Z. O. Beaudry, M.D., in physiology and histography; all three of these medical men being at the same time on the teaching staff of the medical faculty of the Victoria University. Dr. McEachran was sharing the chairs of surgery and of pharmacy with his assistant, Dr. Daubigny, while the latter shared with Dr. M. C. Baker the lectures in anatomy, and Drs. Osler and Clements had charge of the microscopic demonstrations. The practical lessons were followed simultaneously by the French and the English students.

At that time the lectures were taking place all day long, six months a year, the course was of three years duration, and the number of students soon swelled, from three or four, to eighteen.

The end of his five-year contract, at the Montreal Veterinary College with Dr. McEachran, having arrived, Dr. Daubigny joined Dr. Bruneau in trying to open a veterinary college at the Victoria University, Montreal, but the plan fell through, and Dr. Daubigny left the institution which he had founded with Dr. Bruneau and known under the name of "L'Ecole de Médecine Vétérinaire de Montréal, Affiliée à l'Université Victoria." It had been incorporated by Act of the Quebec Parliament in 1888, and was situated on Pine Avenue, Montreal. This school came to be known as the Bruneau School, and, like the Couture School of Quebec City, L'Ecole Vétérinaire de Québec, met with but short success.

DR. DAUBIGNY STARTS NEW SCHOOL

It was not long before Dr. Daubigny opened L'Ecole Vétérinaire Française de Montreal, at 266-270 East Craig St., and up to this year the same building has harbored veterinary establishments. Its fame became thoroughly provincial, and the Daubigny Hospital, vacated only three months ago, to be demolished and replaced by a modern warehouse, was for years the center of extraordinary activity, its owner coming in the long run to be recognized as a leading man in his profession.

No sooner had Dr. Daubigny opened his school, with the help and advice of the then vice-rector of the Montreal branch of Laval University, Father J. E. Marcoux, than he sought affiliation with the Laval University, and it was obtained April 2, 1890, the Quebec Department of Agriculture taking it under its auspices.

The number of subjects taught at the school must now be increased; bacteriology, bovine pathology and veterinary surgery are added to the curriculum, the lectures must take place eight months of the year instead of six, but it is felt generally that the teaching of veterinary science has to be consolidated if it is to last, and the Quebec Department of Agriculture soon informs the directors of the three French schools that it is deemed advisable to have their institutions merged into a single one. So it was that the three charters of the Bruneau, the Couture and the Daubigny Schools became non-existent on January 24, 1893, as was born "L'Ecole de Médecine Comparée et de Science Vétérinaire de Montréal," with Dr. V. T. Daubigny as its first director. It was incorporated December 21, 1895, affiliated with Laval University in 1899, and placed under the auspices of the Quebec Department of Agriculture which yet today provides the yearly grants necessary to its existence.

SCHOOL DEVELOPS RAPIDLY

From then on the School developed rapidly; the teaching staff was enlarged, the number of lectures was increased, available laboratories at the Laval University were made full use of; a library was opened, and a museum of anatomy started, while the clinic still held forth at the Craig St. Hospital. The struggle of the first years had finally turned into days of scientific achievement, and at the time of his death, December 11, 1908, Dr. Daubigny could look back proudly upon his work, because he had built an imperishable monument for his profession, raised its standard to the level of the other professions in Quebec, and, in passing, left the reputation of a man who had performed his task with energy and integrity at all times, ever aiming at doing some good for his fellow-citizen.

After the death of Dr. V. T. Daubigny, his son became director of the School and at the same time secretary, to which position he was appointed January 14, 1909, Dr. G. A. Dauth becoming treasurer. At that time the need was felt of a certain amount of unification of various lectures, and the chairs of contagious

diseases, meat inspection, milk inspection, alimentary chemistry, parasitology and zootechnics were founded.

1908 to 1914 were prosperous years, as many as 63 students registering at the School for one year. Then the war broke out, uneasiness was upon the public, young men were called to colors, and the number of applicants fell off.

In 1918, in the face of this falling-off in number, the present director saw fit to call upon the School Council to pass the necessary by-laws to increase the course from three to four years of eight months' duration, and the suggestion was adopted, placing the Montreal Veterinary School on a par with the New York College. Thus, once more, were increased the number of lectures and the size of the teaching staff.

The following year, in 1919, the Quebec Department of Agriculture came to the rescue of the School once more, and a grant of \$35,000 was made for the building of a modern hospital, which may be surpassed in size but has nothing to desire in the way of facilities.

Dr. E. Persillier Lachepelle, president of the School Council, died that same year, and the School lost a true friend who had associated with Dr. V. T. Daubigny in the foundation of the School, and who had devoted tireless efforts in the upkeep of his pet undertaking. Dr. Lachepelle was at the same time Dean of the Medical Faculty of the Laval University, Montreal.

Dr. Damase G n reux replaced Dr. Lachepelle as president of the School Council, August 20, 1919, and on the same date, Dr. G. A. Dauth became secretary, the writer relinquishing this post to remain solely director.

CREDIT FOR AGRICULTURAL GRADUATES

The time seemed opportune for the granting of privileges to graduates of agricultural colleges, and it was decided to admit the latter to the School as students of the second year, gaining one year through their successful studies at the Agricultural Institute. I cannot say that they have taken full advantage of this rule. Many bright young men availed themselves of the opportunity to become thoroughly trained, and a few of them hold enviable official positions now, but a great many who have chosen to be simple agriculturists lost the chance of raising their efficiency and have been satisfied since to play second fiddle to the scientist.

On February 14, 1920, the School became one of the Charter

Schools of the new Montreal University, and it then took its present name of "L'Ecole de Médecine Vétérinaire de l'Université de Montréal." The years 1919 and 1920 saw the attendance raised, and the class of students admitted was a decided improvement upon the more recent of former years, but later the registration fell off again, and the reasons may be ascribed as follows:

First: The reaction from the war. Conscription, in taking away a lot of tentative students, led many young men to believe that money in youth is a primary condition of life, irrespective of what more experienced persons might tell them.

Second: It means too much work to become a veterinarian nowadays. The young man who is inclined by nature to seek an easy life thinks it foolish to devote the best four years of his life to the study of a profession which may not bring him as much, and certainly no more than, the practice of law, to which he can attain in three years, and the practice of civil engineering or dentistry, which he can start after four years of studies, the same as for veterinary science.

Third: As the standard of education required to study veterinary science has been raised to a degree similar to those of these other professions, it follows that many do not come to us who would otherwise do so. In fact, some students have left us to become students in medicine, law, etc.

Fourth: It is no use denying the fact that the treating of dumb animals is not looked upon in the same light everywhere, and that many young men do not come to us because they would be somewhat ashamed of telling that they are students in veterinary science or because their parents do not look altogether favorably upon the "cleanliness" of the profession.

Fifth: The limited field upon which we can draw, all our teaching being done in French.

Be that as it may, and whatever the reasons, we seem to be on a par with the other veterinary institutions all over the continent, and are faring no worse when everything is taken into consideration. Our registration keeps well above the average. This year the registration promises to be larger than last year.

In concluding, may I be permitted, Mr. Chairman, to thank the Committee on Intelligence and Education for having raised our School to the rank of the schools accredited by the A. V. M. A. I do not know that it will help greatly our graduates, who will

devote their life to the practice of their profession within the bounds of this Province, but what I do know and what I am thankful for, is that the honor bestowed upon our School reflects very happily upon the teaching staff, and the shades of the founder must have leaped for joy when the good news was imparted in the very school where his spirit still prevails.

DISCUSSION

DR. E. M. PICKENS: I would like to ask Dr. Daubigny how the Canadian schools are supported. You get part of your income from the Canadian Government and part from the Province? And the students supply the remainder—is that the idea?

DR. DAUBIGNY: We first started with three hundred dollars and now we have twelve thousand dollars to keep the school going. We get a grant of six thousand from Ottawa, and from Quebec we get six thousand, which makes twelve thousand dollars a year. From the time father started the work, on down to the present day, we have worked practically for nothing. We work for the upbuilding and furthering of the profession. I am devoting my life to it.

You gentlemen of America are rich and don't know what it is to be really poor. But in our province we cannot do what we like; we do what we can—and with the men we have. But we have been somewhat handicapped. Next month we are going to have a big meeting of the Ministers of Agriculture, of Ottawa, and of Quebec, and also the authorities of the University of Montreal. And we may have some changes. Whether for better or worse, I don't know. But I must tell you gentlemen from the United States and other parts of the world, that we are doing the best we can to extend veterinary science in our provinces.

We are glad to have your company, here in Quebec, and we believe it will be a fine thing for us. I think your visit here in this province may help us to work with the Government. I thank you very much for your attention, gentlemen—and I expect we will meet one another again. I hope you will enjoy your stay here very much. I am sorry I do not speak more English. I could speak better in French. (Applause).

THE FIRST CESARIAN SECTION ON THE LIVING WOMAN

In the year 1500, the wife of one Jacob Nufer, a sow-gelder, of Siegershausen, Switzerland, being in peril of her life in pregnancy, although thirteen midwives and several surgeons had attempted to deliver her in the ordinary way, it occurred to her husband, having invoked the assistance of God, to ask the permission of the authorities to deliver her "as he would a sow."

He was completely successful, and thus performed the first Cesarian section on the living patient, who lived to bear several other children in the natural way, and died at the age of seventy-seven.

Another sow-gelder is said to have removed the ovaries of his daughter, in consequence of her lasciviousness, during the sixteenth century. (Dr. Edward Berdoe: *Origin and Growth of the Healing Art.*)

VETERINARY EDUCATION AND PRACTICE IN SCANDINAVIA, WITH SPECIAL REFERENCE TO NORWAY¹

By H. J. STAFSETH, *East Lansing, Mich.*

Division of Veterinary Medicine, Michigan Agricultural College

Having received all my preparatory education in Norway, and having been in the employ of the civil veterinary service of the same country as district veterinarian, you will understand that I am basing my description of veterinary education and practice in Scandinavia on conditions as they exist in Norway, not because I consider them superior to those of Denmark or Sweden, but because I am more familiar with them. Although there may be points of difference in the educational systems and regulations governing veterinary affairs in these three countries, it is my impression that a great similarity exists in this, as in most other respects, throughout Scandinavia.

In order to give a true impression of veterinary education in Norway, I shall have to outline briefly the required preparatory education, as this, in my opinion, is of more than incidental importance.

The requirements for entrance to the veterinary school are the same as those required for admittance to the school of medicine in the state university. This means that the prospective student must have completed the prescribed courses in the common school, high school and gymnasium, which generally cover seven, four and three years respectively. The subjects taken up in the primary and high schools do not differ materially from those taken up in the corresponding schools in the United States, except that considerable time is devoted to the study of religion.

In the gymnasium there are three parallel lines of study, each aiming to fit the student for the particular professional education which he or she expects to pursue in the university. The subjects included in the premedical course are: Norwegian, Old Norse, Latin, German, English, French, history, church history, higher mathematics, chemistry, physics, biology, civics, geography (commercial), elementary geology, astronomy and oceanography, drawing and physical training. Botany and

¹Presented at the sixtieth annual meeting of the American Veterinary Medical Association, Montreal, Canada, August 27-31, 1923.

zoology are dealt with quite thoroughly in the high school and are omitted in the gymnasium.

As there is no veterinary school in Norway, most of the students who take up veterinary medicine go to the Royal Veterinary and Agricultural College in Copenhagen, Denmark. One of the reasons for this is that the course as outlined in this college is accepted as the standard for the professional education required of veterinarians who expect to practice in Norway. Until a comparatively recent date, no other veterinary school was recognized by the Norwegian authorities. The veterinary college in Stockholm, Sweden, which is a model institution in many respects, has been recognized for several years. Recognition has also of late been given to several other veterinary schools that compare favorably with the Royal Veterinary College in Copenhagen, both as to entrance requirements and curriculum. Buildings are now under construction for a modern veterinary college in Christiania, where a research and serum institute, provided with excellent facilities as regards buildings and equipment, has been maintained for several years under most competent direction.

The course as outlined in the Royal Veterinary College in Copenhagen covers four and one-half years. A school year in Scandinavia consists of at least ten months, and the schools run six days per week. Thus, having disposed of all preparatory subjects before entering the veterinary school, the student has a good deal more time available for the study of purely professional subjects than is the case with our students in the United States. This fact, together with a broader and more thorough preparatory education, constitutes the main difference between Scandinavian and the common American veterinary education, as there is no marked difference in the subjects presented.

VETERINARY PROFESSION RECOGNIZED

In Norway, the veterinary profession enjoys exceptional recognition of the value of its service, financially and otherwise. Hence a very desirable class of students enters the field of veterinary medicine. In looking over the list of Norwegian students enrolled in the Royal Veterinary College in Copenhagen, during the year of 1920, I noticed that out of a total of about sixty-four, only two or three came from the families of farmers. Among the rest were sons of bishops, lawyers and prominent merchants. It is rather significant that Norway,

with comparatively limited agricultural resources and a population of less than three millions, can maintain an enrollment of over sixty veterinary students in foreign countries.

In order to secure uniform veterinary service and fairly equal remuneration for all veterinarians, the country has been divided into veterinary districts, and these have been classified in four classes. A district of the first class is one in which traveling conditions are favorable and the animal population is dense, thus offering a good opportunity for general practice, with considerable income from such work. A second-class district is one in which, for various reasons, less can be earned from general practice, and so on. In charge of each district is a veterinarian employed by the Norwegian Civil Veterinary Service.

DISTRICT VETERINARIANS' SALARIES

The salary which the district veterinarian receives depends upon the classification of his district. A class-four district pays the highest and a class-one district the lowest salary, for reasons already mentioned. One portion of the salary is paid out of state funds, and the rest is provided by the district. This salary does not compensate for any service rendered, but merely serves as a retention fee. The civil veterinary service also employs food inspectors, who have their headquarters in the cities. Veterinarians in this branch of work have the title of state veterinarian, and usually draw higher salaries than the district veterinarians, due to the fact that little time is available for general practice. At intervals of given numbers of years all veterinarians in the civil service receive increases in their salaries, according to a given scale, until a certain maximum is reached. All veterinarians in the civil and military service contribute a certain percentage of their salaries to the state pension fund, out of which they draw an adequate income after retiring for any just and legal reason.

While the major part of the work of the state veterinarians may consist of food inspection and the major part of the district veterinarians' work is general practice, one of their principal duties is taking charge of the control and prevention of communicable animal diseases. All infectious diseases of animals have been classified in two classes, namely, malignant and benign. Any person suspecting the presence of a malignant disease in his herd must immediately report to his district veterinarian, or, in his absence, to any other health or state

official. A private practitioner may be called upon to diagnose the disease, and he must make the required reports, but he is not obliged to engage in any control work except by his own choice.

If a district is without a state or district veterinarian, the Director of the Civil Veterinary Service, to whom all suspected or actual outbreaks of malignant, infectious animal diseases are immediately reported, details a veterinarian of the Civil Veterinary Service to take charge of the control work. For this work the veterinarian, no matter what district he is serving, is paid a certain amount per day and all his expenses by the state. Outbreaks of benign, infectious diseases do not have to be reported to the Veterinary Director, but may be handled entirely by the district veterinarian according to prescribed regulations governing each disease. For such work he charges the owner as for any other professional service.

Records of outbreaks of infectious diseases are kept in special books furnished by the state. These are inspected from time to time by the Director of the Civil Veterinary Service or his representative. Monthly reports of the occurrence of malignant infectious diseases are published by the Director and sent to each state and district veterinarian, thus making it possible better to guard against the spread of such diseases. All veterinarians of the Civil Veterinary Service keep complete records of their activities and send annual reports to the Veterinary Director. A summary of these reports, with rather full description of the more important cases, is found in the annual report of the Director of the Civil Veterinary Service. These reports I found to be most interesting and instructive.

Private practitioners are found only in the larger cities and in the better agricultural sections, especially where the district veterinarian is old and does not care to exert himself in general practice.

The army veterinary corps is organized very much like our present organization in the United States.

Finally, it may be mentioned that the system of state examination is unknown in Scandinavia. The education given in the recognized schools of Europe and the examinations which these students pass before being granted a diploma are sufficient guarantees for the proficiency of the successful graduate. No final examination in any school of Norway is given by a single person, and every precaution has been taken to eliminate

the factor of personal favoritism or antagonism. While I do not know the methods of conducting final examinations in Sweden and Denmark, I feel certain that they guarantee as fully against unfairness as do the methods employed in Norway.

DISCUSSION

DR. P. A. FISH: I was much interested in the Doctor's statements about the pension fund. I wonder if he will tell us a little about how it is maintained, and so forth.

DR. STAFSETH: The pension fund is maintained by all employes of the government of Norway, regardless of whether they are in one branch of service or another. The different branches are classified according to a given scale of wages out of which a certain percentage is drawn for the maintenance of the pension fund.

In former years the veterinary profession was in class three or four, I don't remember which, and the physicians in class six. The latter pays about six thousand kroner a year to those who retire after the required length of time in the service. The required percentage of the salary for such pension is, I believe, ten per cent. The veterinarians, in 1920, asked the government to change their status and they are now in class five, I believe. They hope to reach class six, which will mean that they will get the same pension as a physician when retiring. The ten per cent of their salary, which they will be required to pay towards the maintenance of the pension fund, will then be based on an annual income estimated to represent the average for the profession. You must understand that the salary a Norwegian veterinarian gets doesn't pay for any particular service rendered. Everything that a Norwegian veterinarian does is paid for either by the state, or from private sources, aside from his regular salary.

One thing that interested me was that expenses for travel are allowed. So much is allowed for a horse, so much for railroad, for a motor boat, etc., and in every case the rate allowed is higher than that actually needed, so that when a trip is made something may be laid aside from the expense account alone. I thought the remuneration for veterinary work in Norway was exceptional. Ten per cent doesn't seem very high and it guarantees a six-thousand-kroner income when retired, so one may feel comfortably taken care of.

DR. FISH: The government pays something from their own fund on that?

DR. STAFSETH: Yes,—what the professional men put in is just a part.

DR. FISH: That is for government veterinarians only?

DR. STAFSETH: Yes.

DR. E. M. PICKENS: Are the government veterinarians allowed to maintain a private practice besides?

DR. STAFSETH: Yes, as much as their time permits. I might say that over 90 per cent of my work was private practice. I was a district veterinarian. I might also say that the state veterinarians have no authority over the districts, and since they spend only part of their time inspecting foods, they have an opportunity to do a good deal of private practice in the town where they are located and in the adjoining country district.

DR. FISH: Do you think that is why so many go into veterinary work?

DR. STAFSETH: No. I believe that one of the big reasons is the high education required for the veterinary profession. It is the same as for the medical profession except that the medical student must take practical work covering three years, making the medical course proper eight to ten years. But as far as general education is concerned, there is no difference between the veterinary and medical professions. That is what is valued so highly over there. The veterinarians converse as intelligently as other professional men on almost any subject. The fact that the veterinarian is well trained educationally and professionally, the fact that he is highly recognized, and that

he is assured a suitable income, is why so many high-class men enter this profession.

DR. V. A. MOORE: Will Dr. Stafseth tell us a little more about the requirements necessary before starting the professional study?

DR. STAFSETH: I came to this country when I had finished the gymnasium in Norway. That was in 1921. The requirements then were full gymnasium training.

DR. H. J. METZGER: Does a private practitioner get state aid, or does he get a share in the pension fund?

DR. STAFSETH: No. The pension fund is only for state officials or anybody in state service. The private practitioners are very few. I know some private practitioners, however, in the largest cities, who derive good incomes from private practice. They do this simply out of choice. They know that, at least for a time, they can, for various reasons, make more money than in the government service. But most young men today, although they may start out as private practitioners, look forward to going into the civil veterinary service.

There are some private practitioners in the rural districts, but they go into those districts only if there is an exceptionally high animal population—which is the case in the southwest section. The animal population is denser in this section of the country, the dairy herds sometimes containing as many as two hundred cows. In Norway the farmers and dairymen don't try to be their own physicians; they are educated to the fact that the veterinarians can do the work much more efficiently for them.

DR. H. F. FLEMING: What are the requirements necessary for a man to enter the state service? If he is a practitioner and wants to get a state appointment, how does he go about it?

DR. STAFSETH: In my own case, I was connected with the Michigan Agricultural College and I wanted to go back to see my native country; I therefore decided to apply for a position as district veterinarian. I wrote to Norway and asked the Veterinary Director if a veterinarian graduated from an American institution could practice there. The Director at that time was a rather conservative man; he stood for the very highest in the veterinary profession and had no faith in American veterinary education. He said "No." He gave me a flat refusal. A little later he died and another man was put in charge who was an educator and more liberal. He was instructor or professor of physiology, for some time, in the Royal Veterinary College in Denmark. He was a Norwegian, however. I again wrote and asked whether I could apply. He said, "Send in your credentials." I was surprised that one of the things he asked me was, "Are you a member of the American Veterinary Medical Association?"

I might say that one cannot get into Norway as a practitioner without a B. S. degree, or its equivalent, from either an American or a European college or university. They are as strict in the requirements for general education as they are in the matter of professional training.

I sent in my credentials and was finally accepted. They gave me no examinations. When I reached Norway I went to the Director of the Civil Veterinary Service and introduced myself. He said that I was the first man with an American education who had met the requirements. I wondered whether there would be an examination, but he said, "No, we felt that if your schooling was not sufficient to guarantee your proficiency, we wouldn't take you even if you did pass an examination."

I talked with the head of the Research Institute and he said, speaking of taking the state examinations, "I could not pass an examination in anatomy now." And yet he is one of the prominent research men in Europe.

Final examinations in schools, colleges or universities, are given by the Bureau of Education in Norway. A committee is appointed to examine all students in the higher institutions. If there is just one school of one particular type, they examine the students from that one only. But let us take one of the gymnasiums, of which there are a large number, for an example. A certain date is set when the examination will be given in German, another date when

it will be given in French, and so on. The committee of examiners, with headquarters in the capital city, makes out a set of examination questions, puts them in envelopes, seals them officially and sends them to the different schools. At a given hour and date they are all opened, under proper supervision, and given to the students. It usually takes the students from six to eight hours to write their answers. The papers are then sent in to the examiners to be graded. This is the way the examinations are given in all the schools—the same examinations at the same time. This makes state examinations superfluous.

DR. L. A. KLEIN: How many veterinarians in Norway are engaged entirely in private practice and how many are engaged in civil work?

DR. STAFSETH: I think there are between three and five hundred veterinarians in Norway, and out of that number I don't believe there are more than a dozen private practitioners, or perhaps two dozen.

DR. V. A. MOORE: What are the round numbers in regard to animals there?

DR. STAFSETH: The round numbers in animals, I am afraid I cannot give. Norway is a state comparable to Michigan. Of course, Michigan has great industries that Norway doesn't have, but the industries are diversified, due to different climatic, topographical and geological conditions. In some sections favorable to agriculture we find herds of cattle numbering 100 or more, likewise large herds of hogs and many sheep and horses. In other sections we find people who keep just a few sheep, a cow, a pig and a few chickens. On the west coast a common live stock population on the farm is one horse, three to six cows, ten to thirty sheep and one or two hogs.

PITMAN-MOORE TO EXPAND

Ground has been broken for a new three-story building, the first of three that are planned to compose the new Indianapolis plant of Pitman-Moore Company. The structure will house the general offices, as well as the pharmaceutical, analytical and research laboratories. Complete equipment is to be placed in the new plant to provide ample facilities for the rapidly growing business of the company. The plans include large refrigerating rooms for the storage of biological products manufactured in the laboratories at Zionsville, which are the largest in the world devoted exclusively to the production of veterinary biological products.

RECLASSIFICATION OF WILD HAY

The classification of wild hay in the Chicago market has recently been changed. Formerly all wild hay was classified as prairie hay, but the army veterinarians at Fort Sheridan found that much of the wild hay supplied was not palatable and was of low nutritive value.

Wild hay is now classified as "marsh hay for packing, marsh hay for feeding, and prairie hay from Kansas, Nebraska, and South Dakota."

The credit for this change in classification is due to the Army Veterinary Corps.

VETERINARY EDUCATION¹

By C. J. MARSHALL, Philadelphia, Pa.

School of Veterinary Medicine, University of Pennsylvania

It has been said that education is just learning to do the things that one will have to keep on doing as long as one lives. We have been led to believe that veterinary medicine is a comparatively new science and that it has never reached its zenith of perfection. When compared with the history of other branches of education in America, the contrast is not so great as at first it might appear. The creation of tax-supported public schools occurred in 1821. The first normal school for teachers was not organized till 1829. In 1862 Congress passed the bill granting to each state 30,000 acres of land for each senator and member of the House. The income from the sale of this land was to constitute a permanent fund for the endowment and maintenance of at least one college. The United States Department of Education was not established till 1867.

Education—public, collegiate and professional—each made comparatively little progress previous to the Civil War in the United States. A general awakening soon followed. Considerable progress was made up to the time of the World War. The old "boarding-around" plan for teachers in the district school, which was in operation for nearly 100 years, was found inadequate, unjust and decidedly unsatisfactory. The history of the time-honored district school is too familiar to most of us to need comment.

The high school system began to develop about the time that the district school started to decline, and with it has gone the old academy. The high school is far from perfect, even at the present time, yet none can deny the progress that has been made in recent years and the excellent work that is being done by the best educators of today. Colleges and professional schools made most of their progress during the same period. The motto for the present generation is "Education for Efficiency." This slogan is applied from the kindergarten to the highest colleges and universities. It is anticipated that still greater activity along educational lines will follow the World War.

¹Presented at the sixtieth annual meeting of the American Veterinary Medical Association, Montreal, Canada, August 27-31, 1923.

Our veterinary schools began, in a meager way, soon after the Civil War, as private enterprises, and in a few cases were conducted on funds provided by charitable citizens. It has been comparatively recent that public funds were provided for their support. The private veterinary school, like the district schools, has fulfilled its mission.

Due to the foresight and activity of members of this Association, we now have a sufficient number of veterinary schools. The high school will become more efficient and better developed. Not all high school graduates can be expected to be suitable candidates for a degree in veterinary medicine. There are certain natural qualifications that cannot be supplied by a high school or any other system of education. This qualification might be considered as an innate power or one of the faculties of the mind and be classified with observation, imagination, memory, reason, the emotions and the will. Such faculties are born with an individual, and no known system of education can change them to any marked degree.

A DIFFICULT PROBLEM

Most high schools have come to realize that it is unwise or impossible to train all pupils for graduation or for entrance to higher institutions of learning. Many misfits have been trained with such an object in view. A large proportion of those who enter a high school are unable, from economic or intellectual reasons, to complete the course. It is a difficult matter to arrange a course of training for such pupils that will best fit them to meet the difficult problems of life. By the time a boy graduates from the high school, his parents, or even himself, should be able to determine his adaptability for a vocation. It is not unusual that a candidate with the required high school counts presents himself for a course in veterinary medicine, and his diploma is about the only qualification he has. His time and money are wasted in an effort to do something for which he has no adaptability. The old-time, inefficiently schooled candidate, with enthusiasm, ambition, and an intelligent interest in and fondness for animals, was a much-to-be-desired prospect for a life of usefulness. The ideal would be the man with the natural adaptability and the high school training.

Veterinarians can be of inestimable assistance to the profession, and the schools especially, by helping locate and encourage suitable young men to study veterinary medicine. The schools,

the profession and this organization should see to it that the Law of the Yukon is enforced, and that the misfits, dissolute, damned and despairful are not even permitted to begin the study of veterinary medicine, regardless of their preliminary education. We need full-blooded young men with guts, bulldog grit, horse sense, natural fondness for animals, and a high school preliminary training at least. Such men are a credit to the schools and the profession, and a valuable asset to the live stock interests. The public can well afford to provide funds to educate men of the proper calibre. When their school days are over, there will be abundant room for their activities. It is fortunate for the profession that many men of the right type became veterinarians even under the old standard of requirements.

Veterinary medicine has a rather unique relationship to the other sciences. From a medical viewpoint many of our problems are identified with those of human medicine. Our field is much broader, and can justly be considered as comparative medicine.

Our profession is intimately related to the broad science of agriculture, of which animal husbandry is one of the most important branches. Without it there would be no need for veterinarians. Our responsibilities to the human race, in the line of preventive medicine, are practically as great as that of assisting to develop a profitable animal husbandry. We should not forget that we are also a part of our great educational system, and that we must do our share of work in its development.

FORESIGHT SHOWN

In making plans for the future, one should be cognizant of what has been attempted and accomplished in the past along that particular line. In reviewing the activities of our Committee on Intelligence and Education, one will be astonished at the foresight and intelligent thought that have already become a part of our records. We have made progress without doubt, but have by no means completed the tasks for improvements that have been suggested. One report of this committee, that stands out prominently, was presented at the meeting in Kansas City in 1907. Another more recent report was made at Denver. Dr. Veranus A. Moore gave a valuable paper at the last annual meeting along the same line. Many other reports and papers of a similar nature have been presented nearly every year for the past twenty-five years or more. It has been well said that in

genuine learning there is no such thing as mere repetition. There must be something new to be done each day, some new point to be attacked, some new objective to be reached. Before beginning something new, it is well to see that each job undertaken has been completed, and that all reasonable recommendations have received the necessary attention.

Let us examine the committee report submitted in 1907, but which was never adopted by this Association. In this report an adequate veterinary school was planned. It outlined the duties of the teaching body, the equipment, student requirements, support of the school, etc. About the only part of the recommendations that has been completed pertains to the student body. We now have the indicated preliminary education and the four-year course. We are still shy of the adequate teaching force, equipment and necessary support. Possibly we have more efficient teachers and more comprehensive textbooks.

THE ADEQUATE VETERINARY SCHOOL

The curriculum for the adequate veterinary school was grouped under seven general headings, viz: Anatomy, physiology, pathology, hygiene, surgery, medicine and animal engineering; altogether these general headings were to include 43 branches of instruction. The classification did not provide for research, but merely for the practical work of veterinary teaching. Judging from the list presented last year by Dr. Moore, on the subject of the present curricula of eleven of our oldest veterinary colleges in the United States and Canada, the committee report made in 1907 has had mighty little effect.

It is realized that a college curriculum is a sacred document. Outside interference might be considered an unpardonable sin, yet we believe that changes could be brought about by this Association if good and sufficient reasons can be given. Changes should not be demanded too suddenly. If the adequate course can be outlined and adopted by the Association, it should not be too much to expect that the various schools would try to reach the desired goal as fast as circumstances would permit. The curriculum may not be such an important matter after all. No school should be judged so much by its curriculum as by the efficiency of its graduates. An ideal teacher should know best the particular kind of instruction his students need.

Old practitioners and clients are inclined to expect too much

from the recent graduate. Veterinary medicine is not merely a science. It is the application of a group of sciences. No one man has mastered them. Most students can learn enough anatomy in two years to get along reasonably well in one line of veterinary medicine. He is not an anatomist or a scientist in anatomy at the time of graduation. It would require several years of diligent study before he could consider that he had even made a start on a truly scientific life work in anatomy. The same is true in reference to physiology, pathology, hygiene, surgery, medicine or animal engineering. The high school boy learns enough mathematics in his course to get along fairly well in most lines of business. He is not a mathematician. If he aspires to become one, it is estimated that it will require in the neighborhood of ten years of hard work with the necessary instruction to reach his goal.

The instructor, teacher or professor should have expert knowledge in his particular branch. He should not expect a student to absorb it all in one or two years. There is too much, in the average text-book, for beginners. They remind one of the old system of teaching spelling. There are about 400,000 words in the English language. It would be considered foolhardy to attempt to learn to spell each one correctly. It has been found that the average man uses only about 1,000 words in writing or speaking. It might be possible for him to learn to spell them correctly if he did not waste too much time on the other 399,000.

THOROUGH SIFTING DESIRABLE

The teacher in any of the veterinary sciences, or a suitable committee, can render the profession a valuable service by boiling down the subjects to basic facts, and putting them in such form that the student can find and comprehend them. The instructor should then insist on having the rudiments of the subject thoroughly learned. If this were done, the fledgling fresh from the college nest might be able to drench a sheep or cow, administer an aloetic ball, apply a satisfactory tuberculin or mallein test, and many other practical things that the average veterinarian must do.

If the men who wrote the report for the Committee on Intelligence and Education sixteen years ago could measure our schools today by their proposed "adequate veterinary course," they would find none that excelled their dreams. They might be pleased with the progress made in certain lines. We could

show them better buildings, better equipment, better teaching facilities, a better student body but not enough students, more high class men in practice, in official positions, etc.

The answer to their question, Why do we not yet have the adequate veterinary school? could be answered by lack of funds. Our committee at that time recommended federal assistance. Mighty little has been obtained from this source up to the present time, and no desperate effort has been made to get such assistance. Most of our schools have been fairly well housed and partially equipped at state expense. None has met the requirements for equipment or for the teaching body. We evidently have schools enough. We surely need no more schools at the present time, but the ones we already have must be decidedly improved to meet the demands of the future. It is doubtful whether the adequate veterinary school will be built, equipped and manned by state or provincial assistance only, yet it would be a good investment for those that have good schools to do so.

TRAINED VETERINARIANS NEEDED

No greater harm can be done to any science than to overestimate its claims and mistake its nature, but when one considers the vast amount of money invested in live stock, and the extensive losses from controllable or preventable disease in all parts of the country, the number of trained veterinarians that are required to look after the health and sanitation of animals and their products for the federal Department of Agriculture and the Army, one wonders why such men should not be trained at public expense.

The federal and provincial governments designate a standard of efficiency for men whom they are to employ. Why should they not furnish the money or a part of it, at least, to provide the necessary amount of training? If the national government would match the amount of money provided for maintenance by those that already have veterinary buildings and equipment, it might be possible for many of them to come nearer the standard. Is it not time that this Association should make an organized and determined effort to comply with the recommendation that has already been before us for sixteen years in reference to national assistance to support veterinary education?

The report submitted by the Committee on Intelligence and Education at Denver was adopted by the Association, and now

serves as a basis for judging the equipment, faculty and efficiency of methods of instruction in veterinary schools. The work has been faithfully prosecuted, and good results are already apparent.

At our last annual meeting, Dr. Moore presented an excellent paper on "The Veterinary Curriculum." This is worthy of our most careful consideration. Let us see to it that Dr. Moore's paper does not wait sixteen years for suitable action. Practice should not lag too far behind theory. The teachers themselves should make the course of study. Carefully selected committees have been chosen by our present Committee on Intelligence and Education to determine the purpose which should regulate the teaching of the basic subjects and their more detailed classification. Each branch should be reduced to its lowest terms by eliminating all branches, lessons, parts of lessons, etc., which do not specifically contribute to the purpose and the best ways and means of teaching what is left. Each committee should determine what the subject is for, its aim, purpose and essentials, what parts are of first-rate importance, second-rate or third-rate value. It is more important to show how a subject shall be taught than what shall be taught. No subject should be taught for traditional reasons alone. It might in time be possible to have our institutions formed into a league of school systems, and use the committee-made course of study and conduct their common business cooperatively.

DISCUSSION

DR. V. A. MOORE: I do not feel that we should allow a paper of this kind to go by without consideration. We have had presented, in this paper and the one that preceded it, a subject worthy of very careful thought by all who are engaged in educational work. Before we can have men who can associate with those men in other professions, or other lines of work, we must have them educated sufficiently to be intelligently informed.

I believe that general education is of the first importance in training men for any professional work. Some men in the profession do not take part in anything excepting to tinker with the animals that are brought to them for treatment.

The animal owners today are very much better educated in our country than they were thirty or forty years ago. We have many owners who are graduates of colleges and universities, men who have studied physiology, bacteriology and chemistry, men who understand scientific methods, men who know what technical knowledge means, men who understand that methods are necessary and systems are essential for success. When such men call in veterinarians who ignore every fundamental principle of science, the latter can not expect to make very much of an impression.

And so I feel, as the former speaker brought out, that the standing of the man in the profession is governed by his general education and his attitude toward civic affairs, and those subjects in which all people are interested. I don't believe the veterinary profession will ever attain to the high plane we desire until this fundamental training is accepted.

We are a committee of this Association on intelligent education. I have had some discussion with a few of its members, and they feel that we should—that we must—make progress. We can't stand still. We have made tremendous advances in the last ten years in educational work. The committee feels that we must continue to advance. It believes we must require more extended preparation. Shall it be more preparation in the technical school or more preparation in preliminary education?

Personally, I feel that we should have more preliminary education. There should be more emphasis on mental training—such as Latin, Greek and mathematics give. There is needed more chemistry, physics, animal husbandry and biological sciences, but where are we going to put them in?

Now, in New York State—and I think it is also true in Pennsylvania—the horse has gone pretty largely from the cities, and we don't expect that he is coming back, to any great extent. The effect of that is that the boys in the preparatory schools in our large cities know nothing whatever about veterinary work. They do not see the veterinarian's sign. Adults even do not seem to know that the veterinarian is necessary. Consequently we must go to the country and the small cities to draw men to this profession.

At the present time, the financial situation is such that if we should insist upon two or three years of college work before entering upon professional studies, I am afraid we would have even less students than we have now. I am quite sure of it. However, what is wanted is four years of high school and four years of college training before entering the veterinary college. Some of the schools already have an optional five- or six-year course, for the individual who can and will take it. This seems to be the approach to a better prepared profession.

There is another element involved that we must not forget. It is this: You cannot take a boy who has not the native ability in him and materially improve him by prolonging his time for study. The breeding tells for most. You must have good raw material. If a man has not good breeding, you cannot bring him up to a high educational or professional plane, and him have stay there and be satisfied. He will revert back. We have seen that over and over again.

Now it has seemed to me, in thinking this over, that if we could have optional courses, where men would become very thoroughly trained in the collateral sciences, we would get enough into those courses so that in a few years we could insist on one or two years of college work before entering the veterinary school. And perhaps we can then even require a bachelor's degree of some kind before taking up the regular technical subjects.

I do not believe we can mix preparatory and professional subjects. I do not believe it will work out to have cultural subjects taken with technical professional ones. Our experience has been that when a boy is sent out of the veterinary curriculum to take a general cultural subject he feels that it is useless and there is no application for it. He looks upon it as a burden put upon him and a sort of persecution which he resents. I think we must get the cultural studies, or general educational work, into the preparation, and when we begin the professional subjects, we should stick to them.

I feel that there is a good deal in what Dr. Marshall has said in regard to the curriculum. It is a serious question in my judgment, to know what we are going to take out of each of the great sciences, such as anatomy, physiology, pathology, and bacteriology, and put into the few hours of instruction that we can give to any one of these subjects, that will be of the most help, and that will have the most disciplinary value as well as a utilitarian significance. I feel that the choice of subject matter is very, very important. And then I believe in leading up to the federation that Dr. Marshall has mentioned—that there is a good deal that should be done by way of correlating our curricula in the different schools so that a man can pass from one school to another without great inconvenience.

Now that veterinary education in the United States (and it is pretty largely so in Canada, I believe) is in the hands of the state schools, it is very evident that these state institutions are responsible to the people of these two great countries for the training of men in this profession.

Further, the student has some rights. I remember in my medical course that one of our professors was wont to say about our patients, "Remember your patients have some rights." We want to remember that the boys, who are taking up this work to go out and practice veterinary medicine, have some rights. It is up to us, it seems to me, to recognize those rights and make it possible for them to get the best preparation they possibly can in the time and with the money at their disposal.

I am talking too long on this, Mr. Chairman, but these are very important topics. If we look ahead sixteen years, as Dr. Marshall has looked back sixteen years, what are we going to see? If we are going to have what we want sixteen years from now, we must begin to work for it right away!

DR. E. M. PICKENS: I would like to ask Dr. Marshall if he will elaborate on his statement in regard to obtaining federal aid, and how we should obtain it.

DR. MARSHALL: I have no definite plan for getting federal aid. If the federal government could match the amount of money that the states appropriate for running expenses for veterinary education, I believe it should be done.

DR. J. W. BENNER: I was certainly very much interested in the two papers just given. I am very well acquainted with Dr. Stafseth, having been associated with him at the Michigan Agricultural College. It seems to me that in a good many ways the system concerning veterinary practice in Norway is superior to the one that we have here.

Several of the important points in these papers have already been mentioned and commented upon. One of the things that has not been discussed is the matter of examination. It has always seemed to me that the state examinations, as we have them here in the United States, are somewhat superfluous. If an accredited institution gives an examination, and a man passes, it would seem that he should not be required to take a state examination every time he moves into a different state. For example, in my own case, I graduated from the Veterinary Division of the Kansas State Agricultural College and at that time the ruling was in force that a person who passed the required examinations in the course in that institution was permitted to practice in the state without further examination.

When I moved to Michigan, I was immediately faced with a state examination. Of course, as is the condition with all of us, I had not kept up in anatomy and other studies that I had not been using, and it meant a rather intensive cramming in preparation for the state board. I finally reached the point where I thought I could pass it and I did pass it. Later I moved to New York State and was again confronted with the same thing. It means another intensive cram in some subjects but I again succeeded in passing the examination.

I do not know how many more times I will move but I am pretty sure of one thing, that each time I move into a different state I will be required to pass a state board examination. It seems to me that the plan they have in Norway is a good one; namely, that after a man has passed the examinations required by an accredited institution he is entitled to practice veterinary medicine.

Another point which I have been thinking of quite a little since Dr. Stafseth described it is the method or plan of retention fees for practicing veterinarians in Norway. As I understood the Doctor, he said they had four classifications, made, I believe, according to the population of the districts. The federal government gives more aid to the veterinarian located in a sparsely settled district than to one in a thickly settled district, which of course is as it should be. There are a good many places in the United States that are very thinly populated and a man could not, or should not, attempt to make a good living from a general practice only. It seems to me that there is where we could use federal aid or support to good advantage. The farmers and stock raisers in such districts want and need veterinary service just as much as those where the population is more dense but they cannot have it unless the veterinarian receives federal aid. Farmers and stockmen have used this point as a reason for calling in their county agent instead of a veterinarian whose fee, on account of mileage, would be prohibitive.

Therefore, I would say that we should solicit federal aid for the veterinarian rather than for veterinary schools. If the veterinary practitioner could be assured of a remuneration sufficient to support a proper standard of living, more men and a higher class of men would be entering our veterinary schools. Increase in enrollment is a natural reason used for requesting larger appropriations and is one of the best levers for obtaining them. The plan they have in Norway is just that,—the federal government helps to support the veterinarian and you know by what Dr. Stafseth has said that they have a larger number of men and a higher class of men entering the veterinary profession than we have.

DR. P. A. FISH: Dr. Marshall's paper is comprehensive and important. It shows that considerable thought and judgment have been used in its preparation, but I believe that his suggestion relative to federal aid should receive very careful consideration before any active steps are taken.

In recent years there has been, in my opinion, too much of a tendency toward paternalism on the part of the central government. History shows that the pendulum usually swings from one extreme to the other. Just after the Revolutionary War, when the thirteen colonies were organized as the Republic of the United States, the story is told that President Washington journeyed to the city of Boston. The Governor of the State, hearing of his arrival, sent a polite note stating that the Governor of Massachusetts would receive Mr. Washington at the State House. Mr. Washington sent back a note saying that the President of the United States would receive the Governor of Massachusetts at the — Tavern at 3 p.m.,—and the Governor of Massachusetts went to the — Tavern at 3 p.m.

This incident is cited to show the spirit that prevailed at that time relative to state's rights,—a spirit which prevailed with greater or less intensity over a long period of years, until it culminated in the Civil War. Since that war there has been a tendency for the pendulum to swing in the opposite direction. There are certain duties which all of the states owe to the central Government; there are certain relations between the various states concerning which the Government should properly exercise jurisdiction; but in my opinion the Government is going too far if it attempts to exercise its authority in local areas, in matters of intimate details, which concern only the business and welfare of the people of such restricted areas. This function can properly be left to the jurisdiction of the state. There is already some agitation in favor of the Government extending its sphere of influence over matters pertaining to education in general. It is not likely that a Commissioner of Education, at Washington, can deal so efficiently with local educational affairs as the people in the area directly concerned. The Government cannot contribute financially to local institutions except with funds raised by taxation. It is far better, I believe, for the people to spend their own money in such matters than it is to have it spent for them by Government agents, at a remote distance, who are not so conversant with the needs of the community as the people themselves.

It is not likely that the Government will spend any funds in the maintenance of an institution—even if its contribution be much less than that of the state or others interested—and be satisfied with a minor position in matters pertaining to its control. Mixed authority and divided responsibility are factors which are more likely to contribute to failure than to success. If it is desirable for the Government to assist in veterinary education, I believe it would be far better for it to establish a veterinary school of its own and assume full authority and responsibility for it.

DR. H. S. MURPHEY: There are one or two problems that have been raised which I think ought to be emphasized. They have a present-day bearing. I feel that it will be a long time before some of the things suggested will be adopted. In the chairman's address, as well as in the other papers, there was something said about the adaptability of students and the suggestion was made that the practitioner is in a good place to select students with proper capabilities.

We have been making a study of our freshmen students. It is interesting to note that only twenty to twenty-five per cent of the candidates have

learned to be students; by that I mean those who are master students, those who need no further direction in learning the technique of study. I think that sometimes the practitioners have been guided too much by personality and not enough by mental qualifications.

Another point that is offering a serious problem is the fact that many young men who are entering veterinary colleges have not had first-hand experience with live stock. They have not the common technique. To illustrate crudely: In going into a barn they would not know on which side of the horse to enter a stall or the same with a cow. Those things, while they may seem superfluous, are necessary. I believe that it is not fundamental education alone that is essential. Natural qualifications and adaptability also count for quite a little.

U. OF P. CLINIC REPORT FOR 1923

The report of the Veterinary Hospital at the University of Pennsylvania, for the calendar year 1923, is published in the annual Announcement of the Veterinary School, just issued. A total of 6775 animals were treated during the year. In the Surgical Clinic for Large Animals 255 cases received attention, of which 173 were operated on under chloroform anesthesia. A great variety of conditions were treated, among the more common being: quittor, 21; fistula of the withers, 15; roaring, 8; fistula of the poll, 7; street nail, 7; empyema of the sinuses, 7; and spavin, 7.

In the Medical Clinic for Large Animals 138 cases were treated. The disease most frequently met with in that clinic was azoturia, of which there were 76 cases; next in order was colic, 14 cases; influenza, 10; pneumonia, 8; and tetanus, 4.

A total of 445 cases were treated in the Free Dispensary for Large Animals.

In the Free Dispensary for Small Animals 2609 cases received attention, and in the Hospital Clinic for Small Animals 3328 cases were treated, a total of 5937. Of this number 4750 were dogs and 1142 were cats, while the remainder included poultry, parrots, canary birds, guinea pigs, rabbits, goats and monkeys. There were more cases of distemper than any other disease, 712 dogs being affected with this disease. There were 426 treated for round worms, 111 for hookworms, and 106 for tapeworms; 492 castrations, 187 oöphorectomies, 315 cases of eczema, 276 fractures, 172 cases of auricular catarrh, 42 cases of demodectic and 53 of sarcoptic mange. These are the principal conditions treated but the list includes practically every condition which may affect small animals.

The report of the Ambulatory Clinic includes 2856 cattle, 399 swine, 160 poultry, 41 horses, 3 dogs, and 1 sheep, a great variety of diseases being treated.

CURRENT EDUCATION OF THE PRACTITIONER¹

By W. K. LEWIS, *Columbia, S. C.*

State Veterinarian of South Carolina

There are no words in the English language that are of greater significance to the average student perhaps than the words "matriculation" and "commencement." They are the Alpha and Omega of college days. They are epoch-making words, in that one marks the beginning of the college life, the other marks the beginning of the professional life.

All of us are familiar with the usual college life, the long hours in the class-rooms, the quizzes, the grinds, the exams, the burning of the midnight oil, the boarding-house hash, and all the other little details that go to make up a complete college course. And then the all-eventful day arrives, the day we have looked forward to for four long years. We go through the usual formalities of the closing day's exercises, receive our diplomas, bid farewell to our classmates, instructors and friends, return to the old homestead, visit the relatives and friends for a few days, and then we step forth upon the stage of life to act our part in the greatest of all dramas, "Success or Failure,"—this is the real "Commencement."

Do you remember the strong resolutions you made while yet in college, that upon completing your course you would continue to devote a certain amount of time each day to your text-books and medical literature? And do you remember that upon returning to your home from college you failed to keep the resolution you so earnestly made, not only the first day, but the second, the third, the fourth and many, many more days? And when the thought occurred to you that you had failed to keep the promise made to yourself, you would frame up some excuse that you considered plausible for not doing so, until finally you would arrive at that state when you would say, "Oh, well, what's the use? It is not necessary anyway. Did I not comply with all the requirements of my Alma Mater? Was I not a good student? Did I not finish well up in my class? Am I not a veterinarian? Yes, for I have a sheepskin with my full name and degree on it, signed by the officers of the college

¹Read before the eighth annual meeting of the Southeastern States Veterinary Medical Association, Greensboro, N. C., November 12-13, 1923.

stating that I am—of course I am—a veterinarian." And this is the role in the drama that some of us often play.

The receiving of our diploma is not an indication that we have a full knowledge of veterinary science. It simply means that we have received only the fundamentals, the outline, if you please, and it is up to the individual to complete the design.

Veterinary science is not only a science that deals with the structure and conformation of the domesticated animals, their physiology, pathology and the preventive and curative medical and surgical treatment of the diseases and injuries to which they are exposed, but it deals with their special racial characteristics, their breeding, feeding, general hygienic management, their improvement, their relations to the human family with regard to communicable diseases, and the supply of food and other products derived from them for the use of mankind. Veterinary science, therefore, is not a theoretical doctrine, but is pre-eminently a science of observation and application.

FUNDAMENTAL SUBJECTS

I will not attempt to discuss that portion of our duties as it applies to therapeutics and surgery, but to that portion which has special reference to breeding, feeding and hygiene. These branches are fundamental adjuncts to our profession, and the veterinarian of today who is not qualified in these subjects is greatly handicapped. The day is at hand when we must not only be in position to apply and prescribe remedial measures, but we must have knowledge of the composition and the food values of the different plants and feeds. We know that the chemical compositions of the typical feeding stuffs are composed of inorganic and organic matters, the inorganic matter being water and ash, or mineral matter; the organic matter consisting of crude protein, fiber and nitrogen-free extract (carbohydrates) and fat, and that all feeds are divided into two main classes, roughages and concentrates, and that hays, fodder, straw and silage belong to the roughage class, and that corn, oats, barley, wheat, bran, linseed meal, etc., belong to the concentrate class.

We also know that the animal body is composed principally of water, protein, fat and mineral matter, but, if we should advise our client to change his horse's feed, from a corn-and-fodder diet, to oats, bran and timothy hay, or alfalfa hay, how many of us are there who can tell him authentically why?

How many are there of us who can go with the farmer to his feed bins and select and proportion the amounts of the available feeds, so as to compose a "balanced ration?" How many are there of us who are familiar with the various native grasses, or who can advise how a permanent pasture can be established and maintained; how many head of cattle or hogs can be grazed profitably on a given amount of pasturage, the character and quality of the grasses being known; the proper kind and amount of feed for young calves and pigs, and the sow during the suckling period, and many, many other matters of a similar nature?

QUALITY MUST BE IMPROVED

Live stock raising will not be profitable by a mere increase in numbers, the quality of each succeeding generation must be an improvement over the preceding. This can be accomplished only by giving care and thought to the breeding.

The live stock industry has not reached its full development, it is only in its infancy, and is in need of proper nurturing; our average farmer is not acquainted with the first principles of animal husbandry, he is not familiar with the prevailing types or the general characteristics of the different breeds. He does not know when or why inbreeding should or should not be practised, he is not familiar with the terms "line breeding," "prepotency," "types," "families," and the many other terms that are common parlance among trained and experienced live stock men.

As a rule, the farmer, who has very little if any knowledge of animal husbandry, in choosing a breed does so entirely as a matter of personal preference, which is right, proper and very important, but too often it is the only thing considered, leading sometimes to the selection of a breed unsuited to local conditions, and as a result, his venture is a failure.

Hygienic or sanitary science is another branch of our profession that in many instances is not given sufficient consideration. It is of paramount importance, and if we are to be successful in the treatment of many diseases, close observation and the early application of sanitary principles quite often is of greater value than the administration of drugs alone. In other words, to use the time-worn adage, "An ounce of prevention is worth a pound of cure."

Are we as veterinarians sufficiently qualified to offer our services and give real authoritative advice in these matters?

It is true that those of us who are deficient in the knowledge of these subjects are not entirely to blame. A great many of the colleges did not include these subjects in their curricula, but may have in their catalogues. In the colleges that did give instruction in these subjects, it was usually optional with the student whether or not he attend the lectures.

Have you ever given serious thought to the fact that we, being deficient in these subjects, have actually neglected a very important branch of our profession, and as it is necessary for the farmer to be informed properly along these lines, in order for the live stock industry to develop, this work has fallen into the hands of laymen? Who is to blame for this condition of affairs?

We cannot censure the laymen for our neglect. The blame, and I might add the shame, is upon us. Are those of us, who realize our lack of information on these subjects endeavoring to improve ourselves? If not, permit me to suggest and urge that you do so. Consult your text-books frequently, read your medical journals carefully, obtain bulletins from the U. S. Bureau of Animal Industry and the various experiment stations. Subscribe to and read the leading agricultural and live stock papers. Keep posted as to the market value of live stock. If not a member, identify yourself with your state, regional and national associations; attend the meetings and thereby obtain information from the experiences of others; in other words, keep abreast of the times.

VISITORS AT THE JOURNAL OFFICE

During the past two months the following have been visitors at the JOURNAL office: Dr. L. W. Goss, of Columbus, Ohio; Dr. S. G. Colby, of Plymouth, Mich.; Dr. B. J. Killham, Dr. H. M. Newton and Dr. Ward Giltner, all of Lansing, Mich.; Dr. S. Brenton, Dr. E. P. Schaffter, Dr. John Hoberg, Dr. L. R. Pless, Dr. A. R. Ward, Dr. Geo. W. Rawson, Dr. A. S. Schlingman and Dr. David Marks, all of Detroit.

JUST THINK

The University of Michigan has the largest medical school in the country, from the standpoint of student enrollment. This year there are 597 medical students attending the Ann Arbor institution. Incidentally, there are only 584 veterinary students attending the twelve recognized veterinary colleges in the United States.

THE VETERINARIAN'S PLACE IN THE AGRICULTURAL PROGRAM¹

By ROBERT GRAHAM

*University of Illinois
Urbana, Illinois*

In preparing a few remarks appropriate to this occasion I have been guided by the thought that the veterinarian, first of all, is directly concerned in agriculture through his service in the conservation of animal life. A safe live stock industry is dependent upon veterinary science and the degree of efficiency reached in this science determines in no small measure the future prosperity of animal production. In addition to the direct service rendered the animal industry it must be acknowledged that the veterinarian contributes to the well-being of the community in which he lives by exerting directly or indirectly an influence looking to the preservation of public health.

Tuberculosis, anthrax and glanders are every-day examples of highly fatal animal infections which also claim their toll in human life. The prevention and eradication of such diseases makes the veterinarian an important cog in our public health machinery. Because of the relation of the veterinarian to agriculture the influence which economic factors exert upon this basic industry is inevitably extended to the veterinarian. The very prices paid for agricultural products, as well as the developments in the agricultural industry, are felt by the veterinarian quite as much as the results of direct research in the veterinary field.

No one can doubt the influence of the motor-driven vehicle and the part it has played in veterinary practice. Automobiles, however, have increased the efficiency of the veterinarian by enlarging his territory. Moreover, the diminished demand for veterinary service traceable to automotive power has been largely replaced in many rural communities by the development of other fields of veterinary practice. Notable in this connection is the work in swine and poultry diseases.

What I should like to do is to call attention briefly to the economic situation in agriculture which at this time is of vital interest to the veterinarian. Much of the discouragement and

¹Read before the Kansas State Agricultural College Veterinary Conference, Manhattan, Kansas, February 8, 1924.

doubt in the veterinary profession at this time is probably directly traceable to an unstable agriculture. We have read with alarm of the decreased enrollment in veterinary schools; there is likewise a smaller number of agricultural students in some of the leading collegiate institutions; yet we ask the question, What is the matter with veterinary science? I am inclined to believe that the answer may be found in part in, What is the trouble with agriculture? The prices of agricultural products are subject to the laws of supply and demand. They may be high or low. Low prices are steadying and balancing influences that sober our judgment and arouse anticipation and doubt of the future. The live stock man as well as the veterinarian must be prepared individually and collectively to withstand periods of depression or low prices if he wishes to participate in periods of prosperity.

At a time when farmers prosper, veterinarians likewise prosper and in such periods we are not deeply concerned about the cause of prosperity. A few years ago experienced economists gave us a reason for the advance in prices of agricultural products. During the World War farmers prospered. Millions of men were taken out of productive work and placed in non-productive or even destructive vocations. The demand for food was indicated by high prices of grains and food producing animals. The impulse of price inflation was by some regarded as but a natural growth. The wartime demands misled the farmers in times of peace and as a result we find an apparent tendency to overproduction marked by low prices. And it seems we cannot avoid the fact that at times when collections are slow and prices are generally complained of, they are likely performing their most useful economic service, namely, guiding production back to a peace-time basis.

Again we find other difficulties of a different character confronting us. The policy of veterinary education in the middle-western states is one which demands the serious thought of persons concerned with the future well-being of animal industry and public health. American educational institutions have graduated a creditable number of veterinarians in good faith but little has been done by our state institutions to render the practicing veterinarian the proper technical assistance, or to strengthen his position in a community, with the proper support, looking to the education of the general public regarding the value and importance of veterinary service. A profession sufficient unto itself for all these years, has deteriorated in public appreciation

for the reason that it has failed to keep before the people the service the veterinarian is capable of rendering.

COUNTY VETERINARIAN

In the recent extension of agricultural information from our agricultural colleges, made possible by the passage of the Smith-Lever law, there was but little thought or effort made to formulate a satisfactory field extension policy relative to the teaching of veterinary science. We are all familiar with the confusion that developed between the county agent and the veterinarian. After a few years of experience with our county system of agricultural education, we have begun to feel the need of a definite policy which will provide the proper protection against animal diseases, as well as a rural hygiene that may enlighten the farmer and his family concerning the prevention of diseases communicable from animal to man.

In this connection I would like to call your attention to the fact that in spite of the discouraging situation in agriculture, some of the counties of the middle-western states are employing veterinarians under federal and state supervision to devote their time to the eradication of tuberculosis. The farmers realize that this movement is fundamental, not only to the future of the cattle industry, but also to the health of their children. Illinois has 43 county veterinarians and it is my belief that they are rendering a real service, a public health service which merits the endorsement of the veterinary profession at large.

Private practitioners may in some instances express the thought that the county veterinarian may detract from the prestige of the local practitioner in a community. In my observations I have noted that the county veterinarians engaged in tuberculosis eradication work are doing a certain amount of advisory work with the live stock owners by referring some of the problems of the live stock man to the local veterinarian. In fact, the activities of the county veterinarian may ultimately stimulate veterinary service in a general way and we should look hopefully to the time when all counties may support a federal veterinarian in the field of disease control work. There is probably no better means at hand to bring before the public the value of veterinary service and its relation to the public health. It appears to be, at this time, one means of building up and perpetuating a better understanding between the live stock man and the local practitioner.

VETERINARY RESEARCH

In seeking strength for the future the subject of veterinary research deserves especial attention. Practitioners are continuously expressing a desire for more knowledge concerning the nature of animal diseases in order that they may increase their efficiency in disease prevention and control. There is probably no phase of veterinary science that can be stimulated with the hope of rendering better returns for everyone connected with the live stock industry.

At present research work rests largely with our federal and state institutions and it is hoped that the investigational personnel may ultimately be free from teaching and other duties which so often encroach upon the time of the laboratory man. No better example can be given of what may be expected of research than to mention the far-reaching results from the investigations in blackleg control conducted by your Kansas Experiment Station.

VETERINARY EDUCATION

That I might more clearly bring before you for your consideration what we regarded last year as an experimental extension project in five counties, but which has been extended this year to different localities in our state, I will by the use of slides illustrate a teaching which may ultimately find a place in our agricultural institutions in one form or another. Later it is hoped that the public and the live stock owners, through a better understanding of the veterinarian and the services he is capable of rendering, will enact constructive laws better to govern the control of animal diseases. Any move in this direction must come from a desire of the live stock man but it necessarily needs and must have veterinary supervision.

In this or any other educational plan which may be soundly projected it seems that the limiting factor in the force and value of our teaching is dependent upon the practitioner himself. The object of any extension plan is to educate the farmers relative to the value of veterinary hygiene and the veterinarians relative to disease control problems, which will, under field conditions, afford the best protection to the live stock industry. Careful consideration of the different methods of accomplishing this object will ultimately recognize the veterinary practitioner as the most logical agent around which this work may be developed.

In attempting to summarize, in a general yet brief way, the place of the veterinarian in the agricultural program it should be clear that each veterinarian has his own responsibilities. From the practitioner we must have a high type of veterinary service which will build for him a position of leadership and confidence in the community. He must be able to give to his clients a satisfaction in service that is comparable to that of the successful physician. From the laboratory man, the live stock interests must be served through the veterinary profession by research in animal disease problems with the hope of ultimately clearing up obscure and perplexing questions.

For the county veterinarian there remains a field of service in tuberculosis eradication throughout our middle-western states. In this field of work the practitioner can hopefully expect to assist by becoming an accredited veterinarian. In all of this our agricultural institutions of teaching and research, both state and federal, may exert a profound influence in furthering the technical education of the veterinarian and in enlightening the live stock owner and the public at large relative to the value of veterinary service.

And finally we come to the conclusion that what we do in our local communities or in our laboratories as individuals will largely determine the solidity of the future. There is nothing wrong with the veterinary profession that cannot be traced to ill-defined educational policies and developments in agricultural or related industries. From the agricultural set-back we can hopefully expect to recover. The educational developments are slow to take root but once a solution or a satisfactory method is found, team work will regain much lost ground. Our profession is so firmly identified with the live stock industry that there is no reason for us to doubt the future because the prosperity of our country is basically dependent upon a sound agriculture.

ELECTRICITY TO KILL CATTLE

A press report indicates that electricity may soon be used in large packing plants to replace the present system of killing animals by stunning them with a blow on the head. In addition to the more humane feature of the new method, it is believed by the packers that slaughtering costs can be materially reduced. Experiments have been under way for a number of years, at the Omaha plant of the Cudahy Packing Company, according to the report.

AFTER HIGH SCHOOL—WHAT? THE POSSIBILITIES OF THE VETERINARY PROFESSION AS A LIFE WORK¹

By R. M. STALEY, Philadelphia, Pa.

President Pennsylvania State Veterinary Medical Association

It is, indeed, a very great pleasure, as well as a very much appreciated privilege, to be permitted to ask you boys of the West Philadelphia High School "What are you going to do when you have finished your high school course?" and to be permitted to direct your attention to the study of veterinary medicine as a possible answer to that question.

It is to be hoped that every young man in this auditorium has been giving the matter of higher education very serious thought and has got, at least, to the point of making a firm resolution that his education—his equipment to enter the battle of life—will include a college education. This should be the mark at which you are aiming even if, viewed from today's position, there is only a most remote chance of your being able to realize such a good and worthy ambition. Fix your target good and high! Keep it in sight always, apply yourself diligently to your present-day tasks and you will find that as the days go on you will be climbing nearer and nearer to your goal.

If you have not as yet given this matter serious consideration, I urge you to do so NOW. Circumstances force many young men to seek employment upon the completion of their high school course and many of these young men, as well as others who were forced to leave school at even an earlier period, have "made good" in the world. But what makes such individuals stand out so prominently? It is because they are *exceptions*. In these days of great attainments and days of specialization, the boy who comes to manhood without a good solid education, usually spends his life with his nose pretty close to the grindstone. He pauses in his labors only long enough to express regrets that he did not stick to his studies. MAKE an opportunity for yourself to go to college and fit yourself to compete with other men on an equal footing.

You are urged to give this matter of your own future most serious consideration and to include in your deliberations, the possibilities offered by the veterinary profession.

¹An address delivered before the West Philadelphia High School for Boys, December 11, 1923.

THE VETERINARY PROFESSION

For the benefit of the few who may not be entirely familiar with the fields open to the present-day, qualified veterinarian, let us consider this phase of the subject first. Let us consider the name of this profession we would have you take up as a life work. The word "veterinary" is an adjective. It has its origin in the Latin word *veterinarius*, meaning "of or pertaining to beasts of burden." The noun is "veterinarian." Therefore, a man who graduates in veterinary medicine is a veterinarian. Originally the veterinarian, as his designation indicates, was called upon to attend the ailments and injuries of the beasts of burden almost exclusively. His patients were the ox and the ass. Later, when these beasts of burden gave way to the faster and more efficient horse and mule, the veterinarian's practice changed to the care of sick and injured horses and mules.

Perhaps you boys, seeing comparatively few horses and mules on our city streets, have come to the conclusion that the automobile has entirely supplanted these animals, as a method of transportation. If this were true, and if the veterinary profession had continued to minister to horses and mules only, then the death-knell of the profession would have been rung. However, the veterinarian of today is qualified, by reason of his special training, to care for all species of live stock, and he is also qualified to be of service to all phases of animal industry and veterinary medicine. The veterinary colleges of today are graduating men well qualified, not only to become general practitioners, but men who are trained in preventive medicine, the control of contagious and infectious diseases, the protection of meat and meat food products, the protection of milk and milk foods, as well as men qualified to do veterinary teaching, administrative, laboratory and research work.

AN ANIMAL ENGINEER

The veterinarian of today is trained to take his proper place in the safe-guarding of public health. He is perhaps the most important factor in protecting YOUR health, and public health in general, from diseases of animals, which are transmissible from animal to man as, for instance, tuberculosis, rabies, anthrax, glanders, actinomycosis, cow pox, malta fever, foot and mouth disease, intestinal infections, etc., etc.

The qualified veterinarian occupies a very important place in the life of the community in which he lives. He is usually active

in social and civic affairs and, since he is the one man in the community especially trained in the care, feeding, breeding, treating and handling of live stock, his advice is continually being sought on these problems. In fact, the veterinarian is no longer the man who has to do solely with the ills of the beasts of burden. The qualified veterinarian of today is indeed an *animal engineer*.

There are many reasons why the veterinary profession should appeal to young men. It affords a wonderful opportunity for humane service. It affords just as great an opportunity for actual service of great economic importance. It offers an honorable professional career, lucrative in direct proportion to the educational foundation you have and the honesty of purpose with which you apply yourself to the phase of professional activity you decide to follow.

I have told you something of what a veterinarian really is, the fields of activity open to him and his importance to society. It is hoped that your interest has been aroused. I now wish to go a step further. I will ask every one of you boys to consider seriously taking up the study of veterinary medicine, upon the completion of your high school course.

A young man, giving serious consideration to preparation for his life work should, of course, consider the social, ethical, moral and similar aspects of the subject. If these considerations are found to be entirely satisfactory, in connection with the career in which he is interested, the bed-rock proposition then to be considered is the heights of success which he might reasonably expect to attain, as measured in dollars and cents.

PROFESSION NOT OVERCROWDED

No glamoring lure of enormous wealth can be held out to the prospective student of veterinary medicine, any more than such a future could, or should, be dangled before the eyes of a young man considering entering any profession. However, it is conceded that the veterinary profession is not, at this time, overcrowded. Judged by the attendance at our veterinary schools, the profession is not in danger of being over-crowded for some years to come. On the other hand, present conditions indicate that in a few years a serious shortage of veterinary service will exist.

In 1910 there were 199 million animals in this country, exclusive of pet animals and poultry. Their approximate value was

\$5,183,000,000. In 1920 the number of animals had increased to 215 millions and their value to \$8,566,000,000.

In 1910 there was an average of one veterinarian to every 17,000 animals, valued at \$436,000. In 1920 there was only one veterinarian for every 24,000, valued at \$966,000.

It must be remembered that all registered veterinarians in the country are included in the above figures. A considerable number of these veterinarians are not engaged in general practice. Therefore, the number of animals and their value, per practicing veterinarian, is undoubtedly much larger than indicated by the figures quoted.

With the number of veterinarians available for general practice decreasing, and the number and value of the live stock of the country increasing, it is only reasonable to suppose that the law of supply and demand will operate to make the practice of veterinary medicine even more lucrative in the future than it has been in the past.

OPPORTUNITIES FOR VETERINARIANS

You must keep in mind that the field for the well qualified veterinarian is not confined to general practice. Our veterinary schools are constantly searching for especially well qualified men for their teaching staffs and laboratories. Our federal, state, city and county governments all employ trained veterinarians in administrative, laboratory, field, meat inspection and dairy inspection work. The United States Army has a very attractive service for veterinarians. Its Veterinary Corps offers an opportunity for veterinarians to become officers in the United States Army, and the present tables of organization provide grades for veterinary officers to and including the rank of colonel.

Having explained something of what a veterinarian really is and the advantages of veterinary medicine as a life work, I wish to tell you something of the standards of veterinary education in this country. The first-class veterinary colleges of the United States conform to the educational standards of the American Veterinary Medical Association, the United States Bureau of Animal Industry, and the United States Army. To enter a first-class veterinary college, a young man must be of good moral character. He must be a graduate of a standard, four-year high school, have equivalent credits, or pass the entrance examinations.

"Where is veterinary medicine taught?" "Which is the best college?" "With whom should I get in touch to secure further

information?" Naturally these questions occur to you at this time, and I will answer by saying that courses in veterinary medicine are offered at some of the largest and finest universities in the country. Any of the veterinary colleges of this country which comply with the requirements of the bodies referred to above, are good schools and if I can be of any possible assistance in placing any of you boys in touch with any of the veterinary colleges, I will be very glad to be of service.

Don't allow this matter to drift along. DO IT NOW!

PIG LOSSES PREVENTABLE

That about one-third of pigs farrowed in the spring die before weaning time, is shown by reports from representative farms in four Corn Belt States. A summary previously issued by the United States Department of Agriculture showed an average loss of more than 35 per cent, on 168 farms in Indiana, Illinois, and Iowa, of 18,837 pigs farrowed in the spring.

Additional information on this subject was recently furnished the department by H. G. Zavoral, live stock specialist of the Minnesota University extension service. The Minnesota survey covered 363 farms. Of 27,412 pigs farrowed on these farms in the spring of 1923, a total of 9,300 died before weaning time. This loss of 34 per cent compares closely with a loss of 33 per cent in that State the preceding year, and also with the percentages for the other States.

The chilling of young pigs can be largely prevented by proper housing at farrowing time. Those crushed by being laid on by the sow could have been saved in many cases by the use of guard rails around the sides of the farrowing pen, to prevent the sow from lying against the wall. The farrowing of weak or dead pigs is preventable in a large degree by the use of vigorous breeding stock and proper care and feed given the sow before the pigs are born. Detailed information on swine management and methods of reducing the losses mentioned may be obtained without charge from the Department of Agriculture, Washington, D. C., as long as the supply lasts.

Sixteen children were recently given the Pasteur treatment in Cleveland. They were believed to have been either scratched or bitten by rabid dogs. Twenty-one dogs have been found with the disease in Cleveland recently.

ADDRESS OF WELCOME¹

By R. A. PEARSON

President, Iowa State College, Ames, Iowa

I heartily welcome you to Iowa State College and to the Veterinary Division. This is one of the very important divisions of the college. It is a pleasure, also, to welcome Dr. John W. Adams, my old friend from the University of Pennsylvania. I do not propose to tell you anything about the scientific side of veterinary medicine. You know more of that than I know. But for a few moments I would like to talk to you about how the veterinary profession looks to a layman.

Veterinary medicine and veterinary practice depend on agriculture. Agriculture is having a hard time. Some people think the farmers are complaining too much. If we judge by the rate of turnover, the farmer has a right to complain twenty times as long as a manufacturer. We are producing more than the country can consume and we have not found a good market for the surplus. But agriculture is holding its own. Better times surely are coming.

Some mistakes have been made. Some farmers have felt that they should do their own veterinary work, and some laws favoring this have been passed. When there is a great popular wave demanding such legislation it is useless to oppose it. A good many farmers have themselves used hog cholera serum and virus with more or less success. We do not believe it best for farmers to do work that veterinarians can do much better and in the end we believe things will correct themselves. Some farmers have bought equipment for use with hog cholera serum and the second year they found the equipment in bad order and have called the veterinarians.

Anything that depends entirely upon agriculture is suffering as agriculture suffers and while we can look forward and see agricultural prosperity with hogs and cattle selling at fair prices, at the present moment our examination of agriculture and the veterinary profession is not very cheerful. We are looking through a telescope reversed. Let us hold the telescope in the right way and look again at veterinary medicine. We will find that agriculture depends upon a prosperous live stock industry. The live stock industry in turn depends upon veterinary medicine.

¹Delivered at the Veterinary Practitioners' Short Course, Ames, Iowa, January 17, 1924.

I wish everyone could have heard the informal talk Dean Stange gave on this subject recently to a room full of laymen who knew very little about the meaning of veterinary medicine; when he had finished they were all willing to admit that both our health and our happiness depend largely upon this profession.

Veterinary medicine is fully justified because of what it does for animals but in addition to this it deserves great credit for what it has contributed through other channels, for example, to human medicine. Recall the great work in finding the cause of and remedy for Texas cattle fever. Dr. Salmon should have been rewarded generously—a million dollars would have been small pay—but he suffered the fate of a martyr.

If the live stock industry depends on veterinary service then it is important for veterinarians to be interested in the live stock industry. The best suggestion I can give is that all veterinarians should show an intelligent interest along this line such as is shown by some. The animal husbandmen want your help. They never resent it. Dr. E. S. Deubler, of Pennsylvania, through his interest in Ayrshire cattle, has given a large group of people a different and a better attitude toward the veterinary profession. Dr. Leslie M. Hurt, one of our graduates, has done such splendid work for the animal husbandry interests of California that some of those people claim him as their greatest benefactor.

Some veterinarians are helping local fairs and encouraging exhibitors to bring out their best stock. Some get behind breeders' associations. Everyone ought to get behind boys' and girls' club work with stock. It always delights us to see a veterinarian come to Cattle Feeders' Day or Swine Feeders' Day with a group of farmers. The veterinarian can interpret our experiments in the most helpful way.

If I have not mentioned a good way to help the live stock industry I am sure you can find a way that will be adapted to your situation.

I look upon the professions of medicine, dentistry, law, and veterinary medicine as being equal in dignity and importance. The individual man in any of these professions will be rated in his community not by his profession but by his own personal worth.

One other suggestion: All veterinarians should be thinking about how they can help interest young men of the very finest type to enter the veterinary profession to fill the depleted ranks. The right kind of young man has a wonderful opportunity in this line of work.

VETERINARY SERVICE¹

By N. S. MAYO, *Chicago, Ill.*

There are several factors that generally influence those who enter the veterinary profession. The first and most important is a love for animals. If one lacks this, they are making a mistake in entering the profession. Another factor is the opportunity the profession offers for making a livelihood, one cannot conscientiously say, "making a fortune." If there is some optimist who thinks he can make a fortune in veterinary practice, he will have to do some complicated figuring under present conditions. Even under normal conditions, if a man's ideal is to make a fortune he had better follow some other calling. The third factor to be considered is the opportunity the veterinary profession offers to be of real service to humanity as well as to animals.

There is an old English rhyme that says:

*"A cow and a sow, a mare, ewe and hen
Bring financial salvation to men.
And then, besides, if you have a good wife,
There's nothing to hinder your enjoying life."*

You will agree surely that there is more truth than poetry in this quotation. The point to be emphasized is that the live stock industry is the basis of a really substantial and successful agriculture, and agriculture is the foundation of our national life. It is the function and duty of the veterinarian to protect and build up the live stock industry upon which rests not only national prosperity, but his professional welfare also.

In a general way, the value of animals in dollars indicates the amount the owner is willing to spend for their treatment, but this does not necessarily apply to small animal practice, where the value of pets may be the place they hold in the affections of the owners.

The great field of the veterinarian, at least the country practitioner, is that of service to the live stock industry, and if he cannot render that service there is no reason for his existence. How can that service be rendered?

First, by giving to the farmer and stockman the best of professional skill in the treatment of sick and injured animals, and

¹Read before the forty-first annual meeting of the Illinois Veterinary Medical Association, Chicago, Ill., Dec. 4-5, 1923.

in the prevention of transmissible diseases. To do this one must keep up to date in his profession by reading the veterinary journals and bulletins on subjects relating to the live stock industry. The average farmer and stockman is well posted these days, as he should be, on the underlying principles of hygiene and sanitation. What he expects of the veterinarian is definite directions for putting these into effect under existing conditions. The writer, after twenty-five years, still recalls with chagrin of learning of the Schmidt treatment for milk fever from a layman.

If you are practising in a dairy region, take a good dairy journal; if in a general live stock region, take a good stock journal and a poultry journal, and be sure and get the bulletins from your own State Experiment Station, from the State Veterinary Service and from the U. S. Bureau of Animal Industry. Then cooperate with the State Veterinarian, the Experiment Station and University in serving the people of your community. At the present time, in this state, a plan for testing flocks of poultry to control bacillary white diarrhea has been devised by the State Veterinary Department and the University, in their efforts to serve the people of this state, that needs your services as a practicing veterinarian. The financial returns to the veterinarian are of necessity very small, but its possibilities for real service are great, and you need not fear as to the ultimate returns.

To be of real service one should be a leader in his community, at least along professional lines. If there is an outbreak of hog cholera in the community, a brief write-up in the local paper, outlining the control measures that should be taken, is of real service.

Have you taken an active interest in seeing that the meat and milk supplied your town are prepared under clean and sanitary conditions? Have you cooperated with the local health officer in protecting the public health of your locality? Are you cooperating with the farm adviser of your county? The farm adviser needs your advice and cooperation, and his good will is a valuable asset to you.

Other valuable opportunities for service will be found in farmers' institutes, grange meetings, live stock clubs, poultry associations and local fairs. You can be one of the best-advertised men in your locality, and the advertising will be strictly ethical, because it will be the result of public service.

A veterinarian should not only be a leader in his community along professional lines, but he should also take an active interest in all movements for the promotion of the public welfare of his community, to better the public schools, and to promote religious and social work. All of these count in the long run. Some may say, "I cannot afford to do these things." As a matter of fact you cannot afford to miss these opportunities to make yourself a valuable asset to the community. When you have done this, your future is assured, not only in a material way, but there are some things worth more than money—the esteem and regard of those of your community who know you best.

TUBERCULOSIS CAMPAIGN STIMULATED BY NEW FILM

The eradication of animal tuberculosis on American farms has been made the subject for an impressive motion picture just finished by the United States Department of Agriculture. The story is founded on a clash between members of a community who see the economic and health benefits, and those who see only the immediate dollar and are blind to future profits and welfare. This film, called "Clean Herds and Hearts," is made up of four reels, the longest picture yet made to illustrate better farm practices. Practically all members of the cast are regular employes of the department, some of them engaged in the campaign which is used as the basis of the story.

The story hinges on the attitude of an influential dairyman who opposes the attempts of the State and Federal governments, the county Farm Bureau and a large group of farmers and the Mothers' Club to clean up the county. The recalcitrant farmer, Craig, has a little girl. Allied with the "villian" of the piece is the mayor of the county seat, who, for financial and political reasons which at first seem sufficient, decides to prevent the success of the project. But the mayor has a married daughter who belongs to the Mothers' Club, and is well aware of her father's weaknesses. By different methods, the two objectors are changed into enthusiastic campaigners for healthy cattle and safe milk.

The new film is a sequel to "Out of the Shadows," which, so far as wide distribution and tangible results are concerned, is regarded as the most successful motion picture produced by the United States Department of Agriculture.

ADVERTISING THE VETERINARY PROFESSION¹

By A. N. CARROLL, Pueblo, Colo.

President, Colorado Veterinary Medical Association

From its inception veterinary medicine has serenely tolerated an obscurity far beneath its stratum of importance to the economic development of the world. Not obscure from lack of merit, accomplishments, or advancement of science, but obscure from misunderstanding, misinformation, and indifference by the public in general, and far too frequently by the parties most intimately affected—the farmers and stockmen, as well as by agencies endeavoring to be of assistance to them—the agricultural press and farm organizations, in addition to our state and national legislative bodies.

No honest legislator would advance radical ideas inimical to the veterinary profession, nor would any good politician deem it wise if both he and the stockmen were made to realize the necessity of the profession to animal husbandry, by logical, forceful advertising, correctly and frequently applied; in other words, educational propaganda, persisting in the facts and refuting insidious propaganda to the contrary.

Collective advertising of an enterprise, a trade or a basic commodity, by the national associations of these bodies or products, is not new, but only within the last decade has developed to a science. Obtaining publicity in a general way regarding a proposition, with the knowledge that it will profit all interested individuals ultimately, is the same principle to be applied in advertising the veterinary profession. Not individual ads, posters, specific treatments, or cheap publicity, which savors of quackery and belittles the profession, but a true enlightenment by educational articles of the many past accomplishments and the possibilities of the future.

Banks, until recently, resented advertising, but the wisdom of their changed attitude and the possibilities afforded are well illustrated in the growth of Christmas savings clubs, through publicity from obscurity a few years ago to millions of subscribers last year; proving a wonderful stimulus to the habit of banking money.

Big business knows the necessity of publicity by spending annually \$800,000,000 in advertising. This represents, however,

¹Read before the annual meeting of the Colorado Veterinary Medical Association, Denver, Colo., Jan. 22-24, 1924.

but 2% of \$40,000,000,000 in sales. The response to advertising is well illustrated by a test display of similarly priced and arranged advertised and non-advertised products, which sold in the proportion of 87.6% and 3.6% respectively, and in only 8.8% of the tests did the customer have no preference.

ADVERTISING—AND NOT COMPETITION—IS THE LIFE OF TRADE

Emerson's proverbial mouse-trap in the present era of advertising would soon lose its popularity to some better-known though possibly less meritorious product. If you have something of merit, don't stifle its future success by silence, but tell it to the world. There are two basic principles of success in the commercial world—creating a demand and supplying that demand. Neither is profitable without the other.

The present popularity of some of the pseudo-medical professions of questionable merit is due to good press agents. No one advocates a similar policy for us to follow, but the power of suggestion is well illustrated.

The medical fraternity has always frowned on publicity, but the influx of "advanced medical sciences," as well as the effectively advertised patent medicines, has necessitated a more liberal attitude toward publicity by giving the facts through the medium of public meetings under the auspices of the American Medical Association, in addition to publicity on medicine by educational articles on public health, control of cancer, tuberculosis, etc., and catchy news items on the uses and benefits of the newer biologics and synergins.

The Metropolitan Life Insurance Company is doing a meritorious work on educational propaganda which is effectively advertising the benefits of legitimate medicine.

The work, rightfully belonging to us, which is often done by herdsmen and foremen or by some handy man about the place, has been due to our inability to sell the profession or the work we perform. Not so much from the standpoint of our personal ability on any simple case, but by our failure to educate them or the owners to the fact that we are a necessity to the general health of their herds and to the successful pursuit of their enterprise. In addition to educational publicity here we must become better informed upon the breeding and feeding problems, so that we will be looked upon as farm advisors on any question that relates to live stock.

There is a crying need of publicity to overcome the all too prevalent thought that the veterinarian was automatically

ushered out with our friend Dobbin, upon the advent of the much advertised automobile. How many times are we asked the question as to our business, by someone expecting to receive a pessimistic reply? The percentage of people is too small who know that we treat to any extent other animals than the horse. Is this not one of the principal reasons for the small number of veterinary students? Would you expect any sane college applicant to consider our profession unless he did thoroughly understand the situation? Telling it to the individual is too slow, and we seldom have the opportunity. We should tell him and every one interested by broadcasting the facts, and where interest is lacking stimulate it by publicity, propaganda, advertising, or call it what you will, but tell it, and then do not go to sleep on the job but keep repeating it at every opportunity.

The profession has advertised some in a small way and that comparatively recently but we are making a start. There are occasional news items in some of our daily papers and farm journals, mostly without a definite aim and some a real detriment, due to ignorance of our work by the writer. A few of the recent favorable editorials in the stock papers have been a wonderful foundation for a well-organized course of publicity.

The series of advertisements being run by Pitman-Moore Company in the farm magazines is advance stuff and deserves our hearty approval. The article appearing in the farm section of many daily and weekly papers and journals from the Veterinary Division of the College are doing a good work. They are on the right track, but we must enlarge on their activities and reach more people more often. The recent articles in *The American Magazine* on dog and cat hospitals, also on the care and feeding of pets, attracted much attention among dog fanciers, and suggested to them more forcibly the thought of the veterinarian in their care.

We are advocating and believe in advertising the profession and not the individual. However, the latter should become identified with such organizations and associations in his community as to be publicly recognized as a live, progressive citizen. The use by individuals of dignified printed pamphlets on the care and feeding of animals, methods of control of infectious diseases, or studies on selection and breeding of better stock, or the sale of some purely commercial product of recognized merit, is an economical, ethical means of advertising practised by many and not looked upon with as much horror as they

would have been a few years ago, showing a more liberal attitude among the profession toward publicity. We have long felt the necessity without realizing it. We are realizing the necessity now, without taking full advantage of the opportunity. Let us formulate a definite, tangible program and put it across.

There are hundreds of interesting topics available on the control of animal diseases and plagues, both past and present, in addition to countless articles on public health, meat inspection, biologics, parasitology, etc., and their relation to the public. Many items which seem commonplace to us by daily contact are interesting to the public if properly presented. We do not need to fear publicity, and the quicker the idea of mystery about medicine is dispelled, and in its place teach of its practical application, the faster we will progress.

In order to get this thing started, this Association should recommend to the new Committee on Policy of the A. V. M. A. that the matter of publicity be thoroughly investigated, both as to the cost and the proper method of raising money, whether by assessments or contributions from the profession and allied commercial houses, the best channels for outlet and the kind of publicity best suited. That a committee be appointed to supervise the character and amount of material to be disseminated and also to act as censors on all articles released. With such censorship in force some organized agency might be found to handle the circulation of the news providing the funds were sufficient. This committee could profitably be composed of the editors of our three journals. They are men who realize the necessity, and are, I believe, thoroughly in accord with the venture and are admirably qualified and in a position to gather and dispense the necessary information.

In addition to articles regarding the profession, its position in relation to animal husbandry and public health, its history and future, which would be in the form of news, it would be necessary at times to purchase space in the farm papers in order to get what news space we need. This could be handled by paid advertisements by commercial houses for some of their products, or, more direct, the use of their products by the profession in the control of diseases. Suitable space might be obtained in lieu of a more liberal number of subscriptions from the profession. Also our journals could carry small interesting items for the practitioner to cut out and give to his local paper. These

papers usually print these articles for their news value at no cost. The average practitioner is not qualified, by temperament or otherwise, or at least does not take time to write any thing for the press thought if properly done it would be of material advantage in his practice. In any event, it would be better to have most articles emanate from a central agency, unless it was something of a local nature, for this thing must not be attempted in a hit-or-miss manner but carefully mapped out and carried to a successful conclusion.

In addition to recommending to the A. V. M. A. the plan for a national program, this Association should follow the same idea and designate some person or persons suitably qualified to supervise the policy and character of state publicity, arrange the medium, for instance publishers of fillers for small weeklies, general agencies supplying news to the dailies and weeklies, in addition to the stock and agricultural press. Articles could also be supplied the national committee and material obtained from them for state and local distribution.

In conclusion, let us not stop with a little discussion of this vital problem, as we too frequently do, but work out our plan and apply it diligently and I am sure our efforts will be well rewarded.

ALL OVER THE WORLD

This issue of the JOURNAL is going to regular subscribers in the following countries:

Argentina	Denmark	Norway
Australia	Dutch Indies	Nyassaland
New South Wales	Egypt	Peru
Queensland	England	Philippine Islands
South Australia	Fiji Islands	Porto Rico
Victoria	France	Portugal
Western Australia	Germany	Rhodesia
Bechuanaland	Holland	St. Kitts
Belgium	Hungary	Salvador
Brazil	India	Scotland
British East Africa	Indo-China	Siam
British Honduras	Ireland	Spain
British Southwest Africa	Italy	Trinidad
Canada	Jamaica	Union of South Africa
Canal Zone	Japan	Cape of Good Hope
Ceylon	Mexico	Natal
Chili	Morocco	Transvaal
China	New Zealand	Venezuela
Cuba		

THE VETERINARY PROFESSION¹

By L. A. MERILLAT,

Secretary, Illinois Veterinary Medical Association

To endure, a profession must do more than obey its doctrine. It must do more than venerate ideals. It must have programs, policies, platforms, which are definitely understood by the people. In other words, to meet the popular approval and public support upon which its integrity depends, a calling must secure for itself a sharply defined and well comprehended status.

A profession clearly distinguishes itself from other occupations by its objectives. In the ethical sense the profession is altruistic, the others egoistic. The profession works for the welfare of the masses after qualifying in the practical application of some department of science. Its ideals are lofty, its motives beyond reproach, its codes unselfish, and its exploitations are for the common good. It has no trade secrets among its members, works in the open, and takes the people into its confidence. The profession does not protect itself by secrets and patents and trademarks. Its discoveries are public property. Its archives, containing records of useful achievements, are open to the gaze of the people.

Having lived up to these requirements through all of the years of medical history, the practice of veterinary medicine is therefore a profession. It has qualified as such. From Hippocrates to Galen; from Galen to Paré; from Paré to Pasteur, Lister and Koch; and from these until now, veterinary medicine has been an obedient ward, obeying a strict code of ethics, and ever keeping pace with the progress of medical science. Its fault has been its self-imposed obscurity. Little known, little understood, the practice of veterinary medicine has scarcely been recognized as a profession by the masses. During all of the centuries its orientation has never been fixed; the role it plays has not been comprehended; and the masses barely know of its existence. And admitting that the prosperity of the nations leans a great deal upon their veterinary service, it seems singular, on first thought, that this attitude has not changed until the present moment. On second thought, however, the fault seems to be our own. We seem to have failed to circumscribe our realm.

¹Delivered at the fifth annual Veterinary Conference, University of Illinois, February 25-26, 1924.

The situation is a national misfortune. It is the inspiration of this article, for no nation can be permanently successful without a good veterinary service. Here in the United States, for example, where there are countless millions invested in agriculture, chaos in veterinary service would spell disaster. Capital would avoid live stock and even land, types of domestic animals would deteriorate and, as disease became more and more rampant, agriculture would become more unprofitable and hence a less attractive occupation and the nation itself would sink into a mediocre position.

It is worth repeating that through the efficiency of its veterinary service the United States is the safest country on the face of the earth to own live stock. Foreign-born scourges have been driven off, indigenous diseases controlled, and every farm where valuable animals are bred has access to skilled veterinary service. It is not a mere eulogy to state that if foot-and-mouth disease, pleuro-pneumonia, rinderpest, tuberculosis, swine cholera, glanders, anthrax, blackleg, and many of the other less formidable animal plagues were not under control, the United States would be a second-rate nation. Indeed few people comprehend to what extent their temporal well-being has depended upon the small coterie of scientific men they know only as horse doctors.

A CASE IN POINT

To illustrate: A rural veterinarian drives to a given farm to administer to a horse discharging at the nose, supposedly from a bad cold, diagnoses glanders, kills the animal, tests the exposed with mallein, and quarantines the premises. Few people fully appreciate what this service means. This one animal, neglected or treated by the uninstructed, would sooner or later have transmitted the disease to other animals on the farm, and from this farm the infection would have been conveyed to other farms, and in turn this district would have contaminated other districts until the horse population of the entire country would have been pested.

The point is graphically illustrated in the recent predicament of Russia. When Russia broke down with revolution, in 1917, it began to lose millions from starvation. The world does not know that much of this misery was due to glanders among its horses, rinderpest among its cattle, and other scourges which devastated the sheep and swine herds, after the revolutionists had replaced its qualified veterinary personnel with uninstructed laymen,

selected for political reasons from among the soldiers of the red army. Russia starved and will not recover for a generation, according to expert opinions, because it allowed its source of food supply to be destroyed through the instrumentality of animal diseases.

While there were other contributing causes to the miseries of Russia, a Polish veterinary officer, sent there to investigate the animal situation, attributes most of its troubles to the appointment of a sergeant of cavalry to the high position of chief veterinarian, to replace a scientifically trained man. Science was ignored, laymen politicians replaced veterinarians, laboratories were destroyed as useless adjuncts, and veterinary schools were closed. While these facts relate to revolution and unnatural conditions, they nevertheless impose a responsibility upon the veterinarians of this or any other country, and upon all men who control the destiny of veterinary education and veterinary practice.

THE SAD FLIGHT OF RUSSIA

In Russia the break-down was rapid. It occurred in a few years. In this country, where practice is thought to be declining and veterinary science deteriorating from lack of public support and appreciation, it is reasonable to fear that we may, although more slowly, arrive at the same end. With the chairs in the veterinary schools empty, appropriations for veterinary education will naturally decrease, the incentive for research will decline, and there will be too few qualified men to carry veterinary science into the barnyard.

The practice of veterinary medicine, like any other occupation, can not progress if it is not attractive to eligible young men, that is to say, if it is not a profitable vocation. Governmental positions, federal, state or municipal, which are being created to meet the approaching emergency, are less likely to attract young men than the individual ambition to establish a profitable, independent income from field practice. Competition, the determination to succeed, the ambition to render competent service, and the morale maintained by personal success are the impelling forces required to make any occupation progress. Veterinary practice is no exception.

These presents suggest the advisability of the veterinary profession adopting definite policies, the lack of which has allowed it to drift. It seems highly important to the live stock industry

of this country that the veterinary profession should survive as such, and that it should not be replaced by something else, something untried, something that may bring veterinary service back to a point of departure we left many decades ago. But we can not survive nor even elicit nominal support unless we sharply define just what we represent and can succeed in having our definition approved by the highest counsel in animal husbandry and through animal husbandry by the people themselves.

We are acquiring the habit of condemning extension work, farm bureau activities, state medicine, and other intrusions upon our realm. Whether these have done harm, except in isolated instances, is problematical, but that they will do harm unless they are controlled by sound policies born of high professional ideals within the veterinary profession seems certain. It is not denied that these so-called intrusions may be helpful as well as harmful. The outstanding thought in my mind is not that of curbing them but of promoting them in such a way as to activate private veterinary practice, and thus promote veterinary science.

The question of defining veterinary practice by adopting policies which will meet general approval covers a wide scope, including agricultural extension, state medicine, education, public health, publicity, the use of viruses and vaccines by the layman, and other equally pertinent subjects which have a bearing on veterinary practice. As the purpose of this paper is merely that of drawing attention to the need of a platform for the veterinary profession no details will be discussed. These are being worked out by the American Veterinary Medical Association with great care and with due regard for all interests involved. When complete they will serve as the text of our future arguments and a basis for all of our activities and attitudes toward any influence that may threaten veterinary progress.

RINDERPEST IN AUSTRALIA

Mr. E. A. Weston, Veterinary Surgeon of Subiaco, Western Australia, has sent us a copy of the *Western Mail* (Perth, Australia), the pictorial section of which contains six photographs taken at Bassendean during the outbreak of rinderpest. Mr. Weston indicated that 1237 head of cattle had been killed, "apparently with excellent results."

CLINICAL AND CASE REPORTS

(Practitioners and others are invited to contribute to this department reports of unusual and interesting cases which may be helpful to others in the profession.)

TA(C)KOSIS?

By S. D. BRIMHALL, Covert, Michigan

Eight hundred May chicks (white leghorn) were being grown under approved methods of feeding, with fine results. About the time they were four weeks old, however, a new pen was built, and a dish, containing an assortment of nails, tacks, and screws, was carelessly left where the chicks could get at them. Shortly after this several chicks became unthrifty, listless, humped up with droopy wings, and occasionally one would be found dead under the hover. Autopsy was neglected at first,



Gizzard Showing Three Large Roofing Nails

but was soon made a part of the routine, and the unthrifty were sacrificed for examination.

Palpation of the gizzard showed it to be enlarged and flabby, and often the presence of a foreign substance could be determined. A majority of these cases showed nothing abnormal except the change noted above, and when the gizzard was opened, it contained from one to three nails, tacks or screws.

The gizzard illustrated contains three large roofing nails. These disc-headed galvanized nails caused the most trouble, and seemed to be preferred by the chicks. Has the galvanizing a flavor which would attract, or was it the bright color? When acted on by the digestive juices of the gizzard, a general disturbance and sometimes death was caused.

In all, some fifty chicks had these roofing tacks in their gizzards. In a few instances the gizzard was punctured by the point of a tack and death by peritonitis followed.

How these small chicks managed to swallow these great-headed tacks is a mystery, and makes one wonder if this is unusual or has the condition escaped observation. Some of these chickens must have obtained some of these nails after they were several weeks old, as the gizzard illustrated was from a chicken about eight weeks old.

CHRONIC PRODUCTIVE PACHYMEINGITIS IN A HORSE¹

*By W. C. PROUSE, Minneapolis, Minnesota
and C. P. FITCH, University Farm, St. Paul, Minnesota.*

The animal, a bay mare, weight 1600 pounds, seven years old, was first seen by one of us, on July 6, 1923. The animal had been worked on a road scraper for several weeks. She suddenly went lame in the left front leg. On examination we found the lameness to be in the shoulder. The owner having a pasture convenient was advised to turn the animal out for three or four days. Following this interval, an apparently complete recovery resulted. The mare was then taken in and put back to work for a short time (two or three days), after which she went lame again. The animal was visited July 12, 1923. The lameness this time was present in the right front leg. The owner was advised to turn the animal out in pasture again, which was done with no apparent change. The symptoms were purely those found in shoulder lameness on each of the above examinations. There was no swelling in the region of the shoulder and no pain but a dragging-leg lameness. The owner was of the anxious type and wanted drugs prescribed. Potassium iodide, in dram doses, three times daily, was given. The animal developed iodism in mild form for three distinct periods.

The mare was observed several times following July 12, while

¹Published with the approval of the Director as Paper No. 455A of the Journal Series of the Minnesota Agricultural Experiment Station.

making calls on other animals. Her condition during this interval was gradually getting worse. She became stiff in both front legs. On October 1, 1923, we called again to see the animal and at first glance the attitude of the head and neck resembled tetanus. At this time the animal was having difficulty in eating from the floor. The neck was so stiff that the head could not be got down to the ground and the appetite was poor. Several days would go by when she would refuse all food. There seemed to be some pain and the animal was uneasy. Another visit was made October 12, 1923. The animal was found lying down, but was made to get up with little difficulty. The animal was taken out of the stable and moved about. Pronounced stiffness was noted in the front legs, head and neck. These were more noticeable than on previous examination. Exercise increased these symptoms. On November 10, another visit was made and the animal was found to be gradually getting worse. The stiffness of the front legs and neck was more noticeable and there was a general "gaunted-up" appearance of the abdominal muscles. At this time we explained to the owner that we did not know what the trouble was and inasmuch as recovery was improbable, stated that we desired an autopsy. During this entire period, the animal never showed any rise of temperature.

On November 15, 1923, the animal was brought to University Farm. The symptoms at this time were similar to the ones previously described. The animal was killed and a careful autopsy carried out. All the internal organs were normal. The only lesion found was a growth on the meninges of the spinal cord, in the region of the seventh cervical vertebra. This growth was an inch and a half long and about an inch deep. The tissue was yellowish, soft and the glistening fibers of the spinal nerves could be seen radiating through the tissues. There was a larger amount of spinal fluid in the immediate neighborhood of the growth. Most of the growth was in the region of the articulation between the seventh cervical and the first thoracic vertebra. Sections of the tissue were removed and fixed in Zenker's fluid and prepared for microscopic examination.

A careful examination of these specimens showed it to be a case of chronic productive pachymeningitis. There were no true tumor processes concerned in it. The meninges were thickened and the nerve trunks and ganglia were surrounded

by dense fibrous tissue, which also enclosed some fat. About the few blood vessels there were some large mononuclear cells, characteristic of a chronic inflammation. The vessel walls were thickened and sclerosed. There was a marked over-growth of connective tissue. There were a few islands of lymphocytes, and other types of mononuclear cells scattered about the vessel sheaths. The nerve bundles were very markedly involved in this sclerosed tissue. This inflammatory process was confined chiefly to the dura.

Dr. H. E. Robertson, Pathologist at the Mayo Clinic, Rochester, Minnesota, who kindly examined these specimens, states: "The sections so far as I can see, if they were taken from a human being, would be diagnosed as a very probable case of



FIG. 1—Section of the spinal cord showing growth attached to the meninges. The short portion of cord was cut from a more posterior part and was normal in appearance.

syphilitic pachymeningitis, but as I am quite ready to admit that lues in the horse does not occur, I am compelled to return the opinion that you are dealing with some granulomatous, that is, chronic inflammatory process." We are also indebted to Dr. James Ewing, of the Department of Pathology of Cornell University Medical College, who also kindly examined these specimens and stated that in his opinion this was a chronic productive pachymeningitis. The definite cause of this relatively rare condition of course is unknown. It probably was some form of trauma.

REVIEW

THE TOPOGRAPHICAL ANATOMY OF THE HEAD AND NECK OF THE HORSE. O. Charnock Bradley, M.D., D.Sc., M.R.C.V.S., Principal, Royal (Dick) Veterinary College, Edinburgh. 228 pages, with 96 figures in the text. William Wood and Company, New York, 1923. Price, \$5.00.

This is the third book of a series on the topographical anatomy of the horse by the author. At the outset it occurs that a treatise on the anatomy of a domestic animal should be comprehensive enough to be of a comparative nature on the anatomy of all the domesticated animals, since the relative value of the horse, as compared with other domestic animals, has materially changed.

As a text, the subject-matter is incomplete (relations, nerve and blood supply of muscles, etc.), therefore it should be used with other complete texts. On the other hand, as a dissection guide, used with other texts, it is too extensive, involving too much of the student's time in perusing written material at the expense of studying his laboratory material. A complete text, either arranged in the order of dissection, with full directions for dissection included, or arranged systematically and supplemented with brief outlines for dissection, is preferable. The author's idea of arranging his material in the order of dissection and his simple style of writing are highly commendable.

The use of the B. N. A. has introduced several terms, *caninus* versus *dilator naris lateralis*; *jugulo mandibularis* versus *occipito mandibularis*; *jugulo hyoideus* versus *occipito hyoideus*; the muscles of the ear and the ventral caput group; accessory nerve versus spinal accessory nerve; subclavian artery versus *brachialis* artery. One should notice that the attachments and action of *M. dilator naris lateralis* of the horse and those of *M. caninus* of homo are wholly different.

It is necessary to take exception to the following: page 107, the skeletal boundries of the orbit, particularly as it relates to the ventral and lateral; page 179, the table elucidating the encephalon would lead one to believe that the hypophysis has its origin from the diencephalon, while, in fact, it arises by an evagination of the stomodeum (oral mucosa); page 180, paragraph one reads, in other words, that there are forty-eight cranial nerves. Had the author used retouched photographs of

sections for illustrations and made greater use of the terms dorsal versus superior, ventral versus lower, under and inferior, etc., he would have increased the accuracy, uniformity and attractiveness of his discussions.

The work is commendable, and should find a place in the library of students and practitioners.

F. W. C.

ABSTRACTS

OBSERVATION ON THE VIABILITY OF THE MAMMALIAN OVUM.

Carl Hartman, Ph. D. Amer. Jour. Obs. and Gyn., vii (1924), p. 40.

In an experiment conducted to determine the time required for the opossum ovum to traverse the fallopian tube, a successful attempt was made to "mark" an egg and recover it after a given time from the uterus. The tubal journey is made in about 24 hours. Among mammals, the opossum holds the record for the rate of passage of eggs through the oviduct. The short period of a single day is sufficient, too, to cause degenerative changes to be noted within the unfertilized ovum. Opossum eggs are still in the pronuclear stage when they first reach the uterus, whereas, in most mammals, the egg has attained several divisions and two or three days have passed when the eggs reach the uterine horns. As the ovum of the opossum passes down the tube, albumen in great thickness and the shell membrane are added to it and offer impenetrable obstacles for the spermatozoa that may be present in the oviduct.

It is possible that in all mammals fertilization must take place in the upper third of the fallopian tube if it has not already occurred in the periovarial space. It is possible therefore that the oöcytes of Eutherian mammals are also no longer capable of conjugation with the sperm after a day's sojourn in the tube. Lewis found that ovulation occurred in the sow about 30 hours after the first manifestations of heat. He bred each of thirteen sows out of heat a total of thirty-four times. In seven of these, services were given on the first day after the period of heat had passed, with positive results in only two cases. Not a single pregnancy resulted from service after the first twenty-four hours after the heat had passed. It seems clear then that the egg cannot wait long for spermatozoa—these must be on hand when ovulation occurs.

W. W. W.

THE ISOLATION OF THE SUBMUCOSA AS AN AID TO INTESTINAL ANASTOMOSIS. A. J. Graham, M. D., F. A. C. S. Surg. Gyn. and Obs. xxxviii (1924), p. 259.

The sliding of coats, or eversion of mucous membrane at operations, occurs between the submucosa and muscularis. It was formerly customary to speak of the everted portion as "mucosa," and thus the submucosa was lost sight of. The intestinal wall is divided into four distinct layers,—the mucosa, submucosa, muscularis and serosa. Of these, the submucosa is the strongest and it is most important that this layer be properly sutured in an intestinal anastomosis.

Catgut is made from the intestine of sheep by crudely scraping off, with a blunt instrument, the mucosa from within and the muscularis from without, leaving an extremely delicate layer which is the submucosa. The margins of the submucosa may best be brought together by the use of a continuous Connell mattress suture. The article is well illustrated and together with the description of the intestinal morphology, indicates clearly the clinical importance of an accurate knowledge of the anatomy of the intestinal wall.

To those interested in intestinal surgery, a perusal of the original article should be found of value.

W. W. W.

BIOLOGICAL NOTES ON THE HEN FLEA, *ECHIDNOPHAGA GALLINACEA*. D. C. Parman. Jour. Agri. Res. xxiii (1923), pp. 1007-1009.

On account of the economical importance of the hen flea in the Southwest, the author undertook the study of this flea at Uvalde, Texas. Detailed methods are given, and of obtaining the life history. The incubation period is from 4 to 14 days, the usual period being from 6 to 8 days. This is dependent largely upon temperature. 43°C. was considered a fatal temperature for the eggs. The larvae began feeding upon the adult excreta within a few minutes after they emerged. It seems to be necessary to have this excreta for the development of the young, since they have never been observed to feed upon other material. A temperature of 50°F. is considered fatal for the larvae within a few hours. The larval period extends from 14 to 31 days.

In the pupal period, the larvae construct cocoons of silk or dust, usually attaching themselves to some firm object. The

pupal period was found to last from 9 to 19 days. The adults are inactive during the first few days after emergence, and do not attach themselves to the host until about 5 or 8 days.

The female becomes engorged and the oviposition begins in from 6 to 10 days after emergence. The female deposits from 1 to 4 eggs per day. The eggs apparently are all deposited while they are attached to the hosts. The adults are killed by a freezing temperature, and die within a few hours when exposed in the incubator to a temperature of 100°F. The minimum period from oviposition to the emergence of the adult is from 30 to 65 days.

The breeding occurred during the winter of 1921-1922, at Uvalde, Texas, in unprotected places where a number of chickens were kept. The flea practically disappeared immediately after the heavy rains of March and April. Two weeks after the rains, it was unusual to find fleas on fowls.

L. W. G.

CALCIUM CHLORIDE A SPECIFIC FOR PARALYTIC HEMOGLOBINURIA (AZOTURIA) OF THE HORSE. M. Ritzenthaler. Schweizer Archiv. f. Tierheilkunde, lxxv (1923), p. 314.

The author treated seven cases with calcium chloride (CaCl_2). The protocols of the cases are given. He regards the drug as a specific since all made a prompt recovery. He recommends the intravenous injection of 5 grams of calcium chloride dissolved in 20 cc of water. The dose may be repeated in 15 or 20 minutes. He claims to have given as much as 30 grams without marked ill effects. It is pointed out that care must be exercised in the injection of CaCl_2 since, should it lodge in the musculature, necrosis is apt to follow.

F. S. J.

THE SPECIFICITY OF THE STREPTOCOCCUS OF GASTRO-DUODENAL ULCER AND CERTAIN FACTORS DETERMINING ITS LOCALIZATION. Edward C. Rosenow. Jour. Inf. Dis., xxxiii (1923), p. 248.

In previous papers it was shown that ulcer of the stomach in man and in domestic animals often is associated with a streptococcus infection in the ulcerated area, that foci of infection, such as in tonsils and teeth, harbor the streptococcus and predispose to ulcer, and that the streptococcus isolated from the

ulcer and from the distant focus has elective affinity for the stomach, producing hemorrhage and ulcer on intravenous injection. Keeping the isolated organisms under relatively anaerobic conditions and keeping them in latent life tended to preserve their specific infecting powers and specific immunologic properties.

This specific streptococcus of ulcer produces a poison within its substance and free in broth cultures which injures selectively the mucous membrane of the stomach, producing hemorrhages, leucocytic infiltration, and ulcer. This specific poison may favor the localization and growth of the living organism in the mucous membrane of the stomach. Experiments in ulcers in dogs indicate that the streptococcus of ulcer is not a secondary invader but that it plays an important part in the production of these ulcers.

The results of the immunization experiments indicate that the streptococci from ulcer, even if different species, are closely related and probably specific of this disease and that active and passive immunization should prove helpful in the prevention and treatment of gastro-duodenal ulcer in man.

S. S.

THE ABERHALDEN REACTION: AN ATTEMPT TO BRING IT WITHIN THE REALM OF PRACTICABILITY. F. C. Smith, M. D., M.Sc. and V. T. Shipley, M. D., M.Sc. *Amer. Jour. Obs. and Gyn.*, vii (1924), p. 24.

One hundred thirty-one sera were tested, 43 of them being from pregnant women, 15 from non-pregnant women and 73 from males. While, during pregnancy, the natural ferments in the serum are somewhat increased, there is no evidence that a specific ferment exists in pregnancy. The tests on sera of pregnant women were uniformly positive, but the large number of positive results on the sera of men and non-pregnant females proves the test of no value for the diagnosis of pregnancy.

W. W. W.

DOG OWNERS ORGANIZE

For the purpose of looking after the interests of dog owners and their dogs, and to secure proper dog laws, the American Dog Owners' and Breeders' Association has been organized in Cleveland.

AMERICAN VETERINARY MEDICAL ASSOCIATION

**Proceedings of Sixtieth Annual Meeting, Montreal,
Canada. August 27 to 31, 1923.**

(Continued from p. 654, February Journal)

REPORT OF THE COMMITTEE ON INTELLIGENCE AND EDUCATION

At the beginning of the year, Dr. J. S. Koen's term expired, and Dr. T. H. Ferguson was appointed to fill the vacancy.

The visits to and inspections of the colleges by members of the committee have included the greater portion of the colleges. A few have been omitted on account of distances involved in making such visits; others have been omitted on account of their uniformity and well-maintained standards. Two visits have been made to the Indiana Veterinary College. One was made during the college year, and it was felt expedient to visit this school again after its reorganization and go over matters pertaining to the essentials of a veterinary college as set forth by the A. V. M. A. Accordingly, the chairman of this committee met with the Board of Directors, which consists of members of the faculty. During this meeting, the Board expressed a sincere desire to adhere closely to the rules of the A. V. M. A.

The colleges have all submitted detailed reports as requested by the various members of the committee. All requests for information from these colleges, with one or two exceptions, have been promptly answered. These requests have been made relative to their adherence to entrance requirements, to present curriculum, faculties, equipment and transference of students. It has been gratifying to note that all the institutions have been able to maintain their appropriations, as in past years, and that some have been able to receive increased appropriations.

The Alabama Polytechnic Institute, Department of Veterinary Medicine, has an entirely new plant, consisting of buildings which are of such size as to accommodate more than the present enrollment. They are well lighted, well ventilated and meet the present demands for veterinary education. They have added considerably to the equipment and anticipate further additions.

The New York State Veterinary College at Cornell University is building an addition to one of its buildings, to cost \$100,000, and has, in addition to this, \$20,000 for equipment.

The Kansas State Agricultural College intends to complete its clinic building in time to be occupied during the coming school year.

L'Ecole de Médecine Vétérinaire, Université de Montréal, was so unfortunate as to have had its building partly destroyed by fire this past winter. It has now been restored to its former condition, although some equipment was lost. A large number of new books has been added to the library.

The Ontario Veterinary College at Toronto University moved into its new \$350,000 building at Guelph. This is a beautiful building, very adequately arranged and well equipped for high-class instruction of students in veterinary medicine. It is well situated, convenient to the Agricultural College, where the students receive their instruction in animal husbandry, dairying, and other subjects closely associated with agriculture.

The following is a list of the students enrolled in the veterinary colleges during the past year:

	Freshmen	Sophomores	Juniors	Seniors	Graduate Students	Totals
Alabama.....	2	4	6	12		24
Colorado.....	16	15	12	20	1	64
Georgia.....	7	3	4	5		19
Iowa.....	23	18	15	17	2	84*
Indiana.....	14	10	14	24		62
Kansas.....	10	15	17	22	1	66
Michigan.....	10	10	9	7		36
Montreal.....	6	6	7	1		20
New York.....	31	11	16	31	7	96
Ohio.....	19	13	15	25	4	76
Ontario.....	17	11	23	36	1	88
Pennsylvania.....	11	11	5	8	2	37
Texas.....	5	5	2	2		14
Washington.....	6	5	4	4		19
Totals.....	177	137	149	214	18	705

*Iowa State College had nine (9) veterinary students registered for the six-year course.

This shows that the total enrollment for the past year has been less than during the preceding year. This is due to the larger number of students in the upper classes who have been graduated as the freshman class this year exceeds last year's freshmen class by six in number. As there are 214 seniors in school during the year, the graduation of the most of these 214 students will considerably reduce the total enrollment for the coming year, unless the freshman class considerably exceeds the enrollment of the past year. Most of the deans of the schools

feel optimistic for the future. At the present time, the inquiries from prospective students relative to veterinary medicine seem to indicate that the freshman class of the coming year will be somewhat larger than of the past year.

SIX-YEAR VETERINARY COURSES

It is interesting to note that there are several students enrolled who are taking the six-year course, and there are a great many inquiries relative to the combined course in animal husbandry and veterinary medicine, looking toward two degrees of B. S. and D. V. M. These conditions indicate that in the not-far-distant future, the colleges of veterinary medicine will be demanding two years of pre-medic work, as has been the case in the colleges of human medicine. There seems to be no feeling on the part of the educators that entrance requirements should be reduced, but there is every indication to satisfy one that the entrance requirements should remain where they are for the present time.

With the vast amount of work and the great number of fields into which the veterinarian enters, it is highly important that he should have an excellent foundation upon which to build his study in veterinary medicine. If he is to be successful, and to compete with men of other professions, and to hold these positions of trust concerned in city and national government, he must be well grounded in the sciences which form a basis for higher education in veterinary medicine. Therefore, we feel confident that there are no men, who have given educational matters in veterinary medicine serious thought, who are willing even to suggest that the entrance requirements for colleges should be lowered one iota.

NON-RECOGNIZED COLLEGES

It is regrettable, in view of the favorable comment by the agricultural press upon the educational requirements maintained by the veterinary profession, that two schools discredited by the American Veterinary Medical Association are continuing to operate in a manner which is far below recognized standards of veterinary education. It is the opinion of the committee that those men responsible for the instruction in such schools are not worthy of membership in this Association, and further that all state examining boards should take measures to prevent the graduates from such non-recognized institutions from taking the examinations in their respective states.

The agricultural press, as expressed most strongly in the *Breeders' Gazette*, realizes the great need for more highly trained veterinarians. The live stock interests, as shown by these publications, realize very fully the importance of veterinary service to the successful production of live stock. Consequently, these men are interesting themselves in the training of men for veterinary medicine. Their realization of the possible shortage of properly trained veterinarians has been well expressed.

PUBLICITY NEEDED

The public in general is quite ignorant of the service which a veterinarian can render to them in the control of diseases of cattle and poultry. This is partly due to the insufficient amount of education which has been extended to them. The American Medical Association has realized the lack of knowledge on the part of the laity relative to the difference between charlatanism and medicine. The same condition in even a greater degree is true relative to veterinary medicine. The American Medical Association, in order to overcome this ignorance on the part of the laity, is publishing a journal which goes largely to boards of health, and is used for the enlightenment of the laity.

It would seem that the American Veterinary Medical Association might consider the publication of a similar bulletin which might be sent to county agents and to Smith-Hughes instructors of agriculture in our high schools. A publication of this kind would distribute through these agents a large amount of the proper kind of information to a great number of people. These publications should contain articles which would inform the laity relative to the possibility of the control of diseases in their flocks and herds. Such publications, in passing through the hands of the Smith-Hughes instructors of high schools, would undoubtedly be one of the greatest stimuli for young men to study veterinary medicine of anything we have had in the past. It will reach the very class of young men whom we most desire as students of veterinary medicine—the ones who are interested in live stock and agriculture.

UNIFORM CURRICULA NEEDED

In December, the Committee asked for a conference of the deans of the veterinary colleges, in Chicago, during the meeting of the U. S. Live Stock Sanitary Association. At this meeting there were present representatives from twelve of the colleges. The discussions were confined largely to an informal address,

given by Dr. V. A. Moore, upon the curriculum. He pointed out that there was a great diversity in the naming of subjects together with a great variation in the number of hours devoted to these subjects in the various colleges. He also made a motion that a committee be appointed to consider this matter more definitely.

Accordingly, ten committees, consisting of five men each, were appointed to represent ten of the major subjects for the curriculum.

It is hoped that through these committees which deal with various courses, that more uniformity in time, subject matter, and methods of instruction will result.

The committee does not feel, in spite of the fact that there are some 18 to 20 fields into which the veterinarian can enter, that it is time for specialization for undergraduate work, but that specialization should be taken up in the form of graduate work. During the past few years there has been considerable increase in the number of men who are following graduate work, leading to higher degrees and specialization in certain fields. At the present time, the demands of colleges, experiment stations, the Bureau of Animal Industry and biological houses are for men who have received special training along the lines of the major subjects in veterinary medicine.

RECOMMENDATIONS

1. This committee recommends the following veterinary colleges as approved colleges for the ensuing year:

Alabama Polytechnic Institute, College of Veterinary Medicine.
Colorado State College, Division of Veterinary Medicine.
Georgia State College of Agriculture, Division of Veterinary Medicine.
Indiana Veterinary College.
Iowa State College, Division of Veterinary Medicine.
Kansas State Agricultural College, Division of Veterinary Medicine.
L'Ecole de Médecine Vétérinaire, Université de Montréal.
Michigan Agricultural College, Division of Veterinary Medicine.
New York State Veterinary College, at Cornell University.
Ohio State University, College of Veterinary Medicine.
Ontario Veterinary College, Toronto University.
State College of Washington, College of Veterinary Science.
Texas Agricultural and Mechanical College, School of Veterinary Medicine.
University of Pennsylvania, School of Veterinary Medicine.

2. This committee recommends that the Secretary of the Association cooperate with this committee to formulate plans for a publicity program whereby information relative to the attainments of the veterinary profession may be disseminated through the public and agricultural press, and, if deemed advisable, by means of such publication as referred to in the above report.

3. This committee recommends that the appropriation of

\$1000.00 available the past three years for the work of this committee be continued for the ensuing year.

4. This committee has received three nominations for honorary membership in the A. V. M. A. These are: Sir Arnold Theiler, C. M. G., Director of Veterinary Education and Research, Union of South Africa, Pretoria, South Africa, nominated by E. A. Watson, Chief Animal Pathologist, Dept. of Agriculture, Ottawa, Ont., Can.; Dr. Charles Porcher, Professor of Chemistry, L'Ecole Nationale Vétérinaire de Lyons, Lyons, France, nominated by Drs. L. A. Merillat, A. E. Cameron and N. S. Mayo; and Professor Alcide Railliet, formerly a member of the faculty of the Veterinary College of Alfort, France, nominated by Dr. Maurice C. Hall, of Washington, D. C.

These three nominations have received the unanimous approval of the Committee on Intelligence and Education, and that committee recommends that these three distinguished scientists be elected to honorary membership.

LEONARD W. GOSS, *Chairman.*

Term expires 1925.

H. D. BERGMAN,

Term expires 1923.

B. T. SIMMS,

Term expires 1924.

JAMES FLEMING,

Term expires 1926.

T. H. FERGUSON,

Term expires 1927.

SIR. ARNOLD THEILER, K. C. M. G.

In recent years much has been said and written on the relationship of veterinary science to agriculture and to show that successful animal husbandry is in a large measure correlated with the successful application of veterinary science. Probably no better or more impressive example of this can be pointed to than that in the development of the live stock industry in South Africa. Twenty to thirty years ago South Africa was noted chiefly for its rich gold and diamond mines, out of which great fortunes were made, and for its variety of devastating animal plagues and diseases, which brought ruin to many and stood in the way of raising live stock with success and profit. Today, live stock of all kinds is raised and brought to maturity in safety, and the success of the industry is assured. Large areas, where formerly animals were doomed to perish of disease, are now teeming with healthy animals. There is a surplus, even an overcrowding of animals, where formerly it was practically impossible to raise and maintain them.

This phenomenal change and development has been brought about as a direct and clear-cut result of the application of scientific methods of disease control and prevention, made possible by continuous veterinary research. It is due, primarily, to the genius of one man. A man, who, as a young and unknown veterinarian, emigrated to South Africa thirty-two years ago, and established himself in the Boer Republic of the Transvaal. He was the first

veterinarian to locate and practice in the Boer Republic. He has devoted his whole life and career to the study of South African veterinary problems, and today he is recognized the world over as one of the greatest veterinarians of modern times. His work and achievements set an inspiring example to veterinary students and to members of the profession. In the pages of modern veterinary science the name of this man—Theiler—will be found appearing and reappearing again and again, for he is one of the very few really great veterinarians who have made veterinary history.

Sir Arnold Theiler, K. C. M. G., Director of Veterinary Education and Research, Union of South Africa, was born in Switzerland in 1867, and was educated at the Gymnasium Aarau. He entered the veterinary colleges of Berne and Zurich, receiving the State's diploma of Veterinary Surgeon (Zurich), 1889, and subsequently the degree of Doctor of Veterinary Science (Berne). In 1891 Arnold Theiler emigrated to South Africa. He was Superintendent of the Vaccine Institute of Smallpox, Johannesburg, 1893, and subsequently Veterinary Adviser in the Sanitation Department of the Rand Gold Mines.

On the outbreak of rinderpest, in 1896, he was called by President Kruger to organize a campaign against the plague and was appointed, for this purpose, Government Veterinary Surgeon to the South African Republic. In this campaign he was associated with Dr. Watkins-Pitchford and subsequently with the famous French scientist, Jules Bordet, a later recipient of the Nobel Prize, also with Dr. Danysz. After the Boer War, Dr. Theiler received a British appointment as Government Veterinary Bacteriologist for the Crown Colony of The Transvaal. In 1906 he became Government Veterinary Bacteriologist to the Responsible Government of The Transvaal; in 1910, Director of Veterinary Research, and in 1918 Director of Veterinary Education and Research for the Union of South Africa.

Sir Arnold Theiler is the founder of the Veterinary Laboratories of The Transvaal and of the Faculty of Veterinary Science in the Union of South Africa, and was the first dean of this Faculty. Sir Arnold Theiler is an Honorary Dr. of the University of Cape of Good Hope, an Honorary Associate of the Royal College of Veterinary Surgeons of Great Britain and Ireland, Fellow of the Royal Society of South Africa, Honorary President of the South African Biological Society, an ex-President of the South African Association for the Advancement of Science, and an ex-President of the South African Veterinary Medical Association. He was the first recipient of the bronze Medal and Grant instituted by the British Society for the Advancement of Science in South Africa. He was the first recipient of the Silver Medal of the Scott Memorial of the South African Biological Society.

Sir Arnold Theiler is an Honorary Member of the Swiss Veterinary Society and of the Swiss Society of Natural History, and of the Natural History Society of the Cantons of Berne. He is a member of the Permanent Committee of the International Veterinary Congress and has attended three of these congresses. He is an Associate of the Société de Médecin Vétérinaire de Paris, and of the Société de Pathologie Exotique, Corresponding Member of the Académie d'Agriculture of Turin, Honorary Member of veterinary associations in England, Ireland and Belgium.

For distinguished veterinary services rendered to South Africa, Dr. Theiler was created Knight Commander of the Order of St. Michael and St. George, by the King of England, in 1914, after having been made a Companion of the same order in 1907. For services rendered to the Belgian Congo he was made a Chevalier de la Couronne du Belgique by King Albert of Belgium.

South Africa now possesses one of the most modern and complete Veterinary Educational and Research Institutes in the world. The reports of Sir Arnold Theiler and his very able co-workers and assistants form a most important contribution to current veterinary literature, and go to show that veterinary science in South Africa is indeed of a very high order. South Africa may feel proud of her veterinary achievements. The veterinary profession as a whole is proud of her South African members.

E. A. W.

PROF. A. RAILLIET

Professor Alcide Railliet retired a year ago from active service on the faculty of the Veterinary College at Alfort, France, but has continued his investigational work so far as his advanced age and his health would permit. I am informed by Dr. Ch. Wardell Stiles that Prof. Railliet has been in rather poor health for a number of years. Prof. Railliet is probably the best veterinary parasitologist in the world today. He has published a large amount of investigational work on protozoan, worm and arthropod parasites, these publications beginning about 1876. The total number of titles listed in the author catalogue of the Zoological Division of the Bureau of Animal Industry for Prof. Railliet as sole author or joint author is almost 400. In 1885 and 1886 he published the first and second parts of his *Éléments de Zoologie Médicale et Agricole*, a work of 1053 pages, later replaced by his *Traité de Zoologie Médicale et Agricole* in 1893 and 1895, a work of 1303 pages. This latter publication is still the most complete work of the sort, although naturally somewhat out of date at the present time. Prof. Railliet has done valuable work in so many groups of parasites that it is difficult to select any field as his special field, but of late years he has devoted much time to the nematodes and is unexcelled as an authority in that field. The present advanced state of knowledge of parasitology in France and the high standing of the French workers in veterinary parasitology must be credited in large part to the work and influence of Prof. Railliet. The American Veterinary Medical Association would be honoring itself and extending recognition many times earned by electing Prof. Railliet to honorary membership.

Prof. Railliet was born March 11, 1852. He is a Chevalier of the Legion of Honor, officer of the French Academy of Science, a commander of the Order of Merit of Agriculture, and member of the following societies: The Academy of Medicine, the National Society of Agriculture of France, the Society of Biology, the Central Society of Veterinary Medicine, and the Zoological Society of France, as well as of various societies outside of France. Previous to his retirement he was professor of natural history and materia medica in the veterinary college at Alfort.

M. C. H.

REPORT OF COMMITTEE ON PREVENTION OF TRANSMISSIBLE DISEASES OF ANIMALS

The Committee on Prevention of Transmissible Diseases, in its report of last year, outlined the various factors which the Committee believed should be considered, and suggested that future reports be confined to special topics.

Your committee this year has, therefore, confined itself to a consideration of hygiene—animal hygiene and environmental hygiene. Hygiene is largely the foundation upon which disease prevention in general depends, and was selected as the topic for consideration this year because of its basic importance.

In reporting on this phase of the subject, we do not aim to present new principles or methods, but rather to emphasize those basic principles of hygiene which too often have been overlooked.

ANIMAL HYGIENE

The importance of individual hygiene in the promotion of health in animals should not be overlooked. The veterinarian

should take advantage of every opportunity to stress to the stock owner, and those interested in the care of animals, the benefits to be derived from measures which promote animal hygiene.

Animals maintained under filthy conditions are especially predisposed to disease. If animals are kept in a sanitary environment and the skin is kept clean and healthy by proper care, they are less likely to become infested with lice, mange, intestinal parasites, etc. With milch animals, the udder frequently becomes infected from causes directly attributable to disregarded individual hygiene. Examples are: Cow pox, infectious mastitis and miscellaneous udder infections. Gangrene of the udder frequently occurs as a result of improper treatment of milk fever.

Considerable attention should be given to oral hygiene, as diseases of the gums, teeth and other tissues may cause the absorption of toxic products, digestive disturbances, etc., and thereby predispose animals to specific disease infections.

The relation of individual hygiene and health of animals to the health of man is well known to the veterinary profession, and should be emphasized more and given wider publicity, and the proper corrective measures should be advocated.

Breeding hygiene is receiving considerable attention at the present time. The transmission of specific infectious diseases and the dissemination of common pathogenic organisms, from male to female and vice versa, through breeding activities, are established facts. Hygienic measures in breeding operations should be encouraged. Animals with diseased genital organs, either male or female, should not be used for breeding purposes as long as the diseased condition continues.

Age and species are important factors in the susceptibility and resistance of animals to certain diseases, as, for example, the susceptibility of young cattle to blackleg, young horses to strangles, calves and foals to scours and joint-ill, puppies to distemper, chicks to white diarrhea, etc. A knowledge of these facts makes a difference in the methods and precautions which should be employed in raising and caring for animals.

Proper care of animals is a necessary prophylactic measure. Animals should not be unduly exposed to adverse weather conditions. An ample amount of proper exercise is as essential to the health of animals as it is to man. The character and amount of work an animal is utilized for has a direct bearing on its

health. Overwork or work for which a particular type of animal is unsuited lowers its vitality and resistance, rendering it more susceptible to infection.

The sanitary habits of animals must not be overlooked. The insanitary practice of permitting hogs to lie in filthy wallows and to feed on fecal material, offal from slaughter houses, contaminated and spoiled food and diseased carcasses, of permitting cows to wade in polluted swamps and filthy barn-yards, are factors in the spread of disease and should be avoided.

The system of management of a herd or flock has a distinct bearing on the occurrence and spread of disease. The proper system of herd management includes a system of disease prevention both as pertains to the introduction of disease into the herd and its spread within the herd. Accurate herd and breeding records are essential adjuncts to a modern system of herd management and will often prove valuable in tracing disease.

Many diseases are transmitted from one species to another. For example, rabies, tuberculosis, anthrax, etc. Animals which are infected and do not show evidence of, or which are harboring, or which are acting as intermediate hosts of disease-producing organisms are most likely to escape attention. Hygienists should, therefore, give due consideration to the carriers of disease.

HYGIENE OF FOOD AND WATER

Realizing that all branches of animal hygiene are essential to successful animal industry, we believe we are justified in rating the role of some phases of it as being more fundamental than others.

Today we find an overwhelming majority of the stockmen, and, we regret to say, too many veterinarians and sanitarians, who look upon all varieties of so-called foods and waters as simply "food and water" regardless of their source, purity and nutritive value. Both are essential to nutrition and indispensable to health and life.

Very slight variations of the water content of the cells of the body are likely to be accompanied by grave disturbances in body metabolism, and, if continued long enough, will lead to severe and specific phenomena. A reduction of water supply interferes with absorption and causes a retention of nitrogenous products of metabolism in the body for a longer period. An insufficient quantity of water brings about an inappetance for

solid food, and causes diarrhea and nausea and vomiting in animals capable of the act. A 10 per cent loss of tissue water brings about shivering, restlessness and weakness, and when the decrease amounts to 20 to 22 per cent, animals rarely survive.

Reduction of solid food contents of the body tissues is not so outstanding as that of water, but the results are just as destructive in the end. We are confronted with the symptom complex, in animals, of starvation in all its phases.

Spoiled food, contaminated water and disease conditions of a specific nature may cause symptoms similar to those of starvation. However, a much larger percentage of them than is ordinarily suspected are the direct result of a definite and actual lack of a sufficient quantity of good, pure, nutritious food and clean water.

Food materials may be greatly deficient in nutritive value or wholly devoid of food elements. Examples: Light oats, screenings, under-ripe and immature forage crops, over-ripe forage crops and crops improperly harvested.

In the promotion of health and maintenance of life, it requires more than good food in abundance. It is essential that foods be available in variety, to meet the requirements of the cellular constituents of the body. No one single food, with the possible exception of milk for the young, can supply all the necessary elements. This involves the question of "balanced rations." Different classes of live stock require rations balanced or proportioned in accordance with conditions.

Realizing that the various mineral ingredients and vitamins are essential to animals, we call attention to the tremendous exploitation of these products by commercialized interests. These commercial mixtures may have the value claimed for them, but "balanced rations" can be worked out with good reliable foods which will answer the same purpose. If the veterinarian should meet with conditions that require special consideration he can procure locally all the "mineral mixtures" and "vitamins" that are required, at a great saving to the owner and increased prestige to the veterinarian as a hygienist.

Food and water as producers or direct causes of animal diseases may be conveniently grouped under three principal headings:

1. Poisons (mineral and vegetable). Examples: Lead, arsenic, phosphorus, strychnin and poisonous plants.

2. Vegetable micro-organisms.

3. Animal parasites.

Water, depending upon its chemical composition, is a powerful solvent and extractive of poisonous substances, especially lead, therefore, it is advisable to avoid using water for drinking purposes that has been in contact with lead conduits, lead containers, utensils coated with lead paints, as well as all wash water from lead smelters and soils containing any form of lead.

Veterinarians should be conscious of the possibilities of live stock becoming poisoned through access to arsenic, strychnin, phosphorus and other poisons in localities where these materials are used for the eradication of rodents, insects, vermin and household pests.

It has not been definitely determined for certain poisonous plants, when they are poisonous, the stage of growth at which poisons develop, the parts that are poisonous, the season of the year, and the determining factors of soils, climates, etc. Examples of this are the development, in some years, under certain conditions only, of prussic acid in late-maturing flax, second-growth sorghums, sugar cane, kaffir corn, etc.

There is an open field for investigational work along this line. Meanwhile, the veterinary practitioner should familiarize himself to the fullest extent with the literature of all poisonous plants in his territory.

Food and water may temporarily harbor and serve as mechanical carriers of pathogenic germs. It has long been accepted that hog cholera, foot-and-mouth disease, pyogenic infections, anthrax and many other specific infections may be water- and food-borne. Spore-formers, like blackleg, anthrax and malignant edema, which are associated with certain soils, are not only sources of danger to pasture grasses but also to forage crops originating from them. Hence, the necessity of the veterinarian being a capable hygienist becomes apparent.

Spoilage in forage and cereal foods is often due to a combination of bacteria, molds, or fungi, yeasts and possibly other vegetable organisms, and may include the various products of decomposition and putrefaction.. Ptomaines, tox-albumins, protein split-products and possibly other toxic disintegration substances may be the result of the different vegetative organisms attacking and breaking down some of the organic constituents of the foods.

Although but few decomposed foods apparently cause immediate disastrous results when fed to animals, the practice should be discouraged at all times. No one, however expert he may be, can say with any degree of certainty, from local observation and inspection, whether a particular specimen of moldy, decomposed forage will or will not cause trouble when used as food for stock.

The bad results which follow the use of moldy silage, as indicated by sickness in horses, cattle and sheep, are very likely not due to the mold alone, but to the other bacteria and fungi present in the spoiled or decomposed silage.

If one is compelled to use foods of a questionable nature, the sanitarian should not fail to give his client the sound advice to try the questionable food upon one or two animals only, until its safety is determined.

The question of animal parasites and their relationship to food and water is one of supreme importance from a hygienic standpoint. Many opportunities for taking up parasites with food and water are offered in the various feed-lots of the farm yard; in lowlands, swamps, sloughs, coulees, and pot holes. These parasites may be present in the form of eggs or larvae, and are found both in the waters and upon the grasses and plants occurring there. The discerning eye of the veterinarian should be keenly on the lookout for such conditions, and he should be prepared to devise ways and means of preventing, combating and eradicating the parasites and eliminating their sources when possible.

Hygiene of food and water is an important field. The veterinarian of the future must, of necessity, be a competent and capable sanitarian who will keep uppermost in his mind the tremendous possibilities of food and water and their bearing upon animal health and disease as met with in the practice of his profession.

ENVIRONMENTAL HYGIENE

Site: The location of barns, pens and corrals is a considerable factor in the development of transmissible diseases. High and dry sites should be selected on account of soil conditions, drainage, water supply, etc.

Altitude: Altitude affects the number of red blood corpuscles in animals and doubtless is responsible for certain chemical changes which have not been thoroughly studied. All other things being equal, the higher the altitude, the greater the

amount of work that is placed upon the heart. In diseases where lung space and heart action are factors in recovery, rarified atmosphere seems to be responsible for some deaths. We question whether transmissible diseases are any more or less prevalent on account of altitude.

Climate: Rain, wind, snow and heat, which go to make up climate, all have their influence on transmissible diseases, largely, however, as predisposing causes rather than in any direct manner. It is well known that chilling predisposes to certain diseases. Temperate climates show a large increase over other climates in pneumonia and other respiratory infections. Tropical climates show a large proportion of insect-borne diseases. Insect life is largely favored by moisture. Animals closely housed for long periods have greater opportunity to spread most diseases than those which run in pastures.

Sunlight: The direct action of sunlight destroys bacteria. Sunlight cannot be depended upon to disinfect stables or corrals, except on the immediate exposed surface. Other than this it is questionable whether sunlight affects transmissible diseases.

Atmospheric conditions: Some have maintained that barometric pressure has been a factor in the development of certain diseases but the experiments along this line have not been conclusive.

Soils: The character of the soil seems to have an influence on the prevalence of the organisms causing such diseases as anthrax, botulism, blackleg, malignant edema, etc.

Drainage: Soil drainage is chiefly of value in keeping down infectious diseases because of its favorable influence in destroying the breeding places for insects.

Water supply: Water supply is a factor in the prevalence of disease as indicated by the spread of glanders from public watering-troughs, hog cholera and anthrax from polluted water of streams or irrigation ditches at certain times. Due to the overflowing, the germs of soil-borne diseases are brought to the surface and after the water of these streams or swamps has receded the diseases in question become more prevalent as a result of animals pasturing over such land.

Disinfection: The experience of governmental authorities in the disinfection of cars and in the disinfection of premises following outbreaks of foot-and-mouth disease and tuberculosis, proves beyond a doubt the great value of both physical and chemical agents for destroying micro-organisms. Thorough cleaning

prior to disinfection is just as important as disinfection itself. Fumigation may be employed where practicable.

Transportation: Many diseases seem to be more prevalent after animals have been shipped or transported. This may be due to infection from the cars, yards, or chutes of transportation carriers or these diseases may be the result of a predisposition brought about by a lowered vitality and resistance of the animals incidental to shipping, or both. A large proportion of influenza in horses and hemorrhagic septicemia in different species of animals follows a railroad journey. The hygienist should give proper advice to his clients with reference to animal transportation and the care of animals at destination.

LOCATION AND CONSTRUCTION OF BUILDINGS

There should be a ground plan of all buildings to be erected or which are likely to be constructed subsequently. This gives opportunity for thought as to constructive, logical arrangement, relative location, relation to prevailing winds, possibilities of preventing unnecessary draftiness and exposure, maximum benefit of sunshine in winter and protection from the excessive heat of summer. Convenience for carrying on the farm operations is very essential and should be given due consideration. A few hours spent in drawing up such a ground plan at the beginning of development on a farm may save much unnecessary work, improve hygienic conditions and become a real factor in the health of the live stock. Agricultural engineering is making rapid progress towards improving and systematizing building construction on the farm. Owners should be advised to take advantage of this information which is at present available through the agricultural colleges.

In developing a ground plan, care should be exercised, particularly in intensive agricultural sections, to keep yards and paddocks from abutting directly on the property line, as this subjects the live stock to unnecessarily close association with neighbors' live stock, which may become a means of spreading disease. The location of pastures as far as practicable, should be carried out so that the length of line fence separating the pastures of the neighbor will be as short as possible.

In actual construction work, the advantages and limitations of various building materials should be considered. For flooring, wood, cement, asphalt, cork and crushed rock all have properties which render one superior to all others. In the arrangement,

construction and equipment of stables, attention to detail is very important.

Proper ventilation, air space and light for buildings in which live stock is to be housed are essential. Stable drainage and solid and liquid manure disposal are very important from the standpoint of sanitation. No plan can be given to handle these conditions which would be applicable over wide areas. The method, so widespread in many parts of the country, of storing manure in the barn yard, should be discouraged. Besides being unsightly and unpleasant, it greatly adds to the danger of spreading diseases. Animals should not have access to the yard in which manure is stored.

REPORT OF THE SECRETARY-EDITOR

For reasons which are readily apparent, this report is divided into two sections, covering (a) those matters which relate particularly to the office of Secretary, and (b) those which are essentially connected with the publication of our JOURNAL.

The office of Secretary was taken over from the former Secretary, Dr. N. S. Mayo, as of October 1, 1922. All properties of the Association in Dr. Mayo's hands were turned over promptly, in conformity with the provisions of Section 6 of Article 5 of the Constitution. Besides the account books, old records, some printed forms, old correspondence, et cetera, there was one typewriter, one filing case, and several small pieces of office equipment.

From October 1, 1922, until January 1, 1923, the office of Secretary was maintained in the Research Laboratories of Parke, Davis and Company, through the kindness of this firm, with whom your Secretary continued his old connection until January 1, as agreed upon. On January 3, 1923, the present offices at 735-736 Book Building, Washington Boulevard, Detroit, Michigan, were occupied. These quarters are down-town, convenient to the post office, bank, depots, and many concerns with which we do business.

It had previously been planned to take over the JOURNAL January 1, and to get out the February issue from Detroit, but owing to the demands upon the Secretary to attend numerous meetings of state associations during January, together with delays incident to moving and getting located, it was found necessary to ask the former Editor, Dr. John R. Mohler, to

continue in the office of Editor for another month, and to get out the February issue of the JOURNAL from Washington. This Dr. Mohler very kindly consented to do.

Examination of the books, shortly after their receipt, showed that a very large number of members had not yet paid their dues for the current year, so one of the first undertakings was to send out second notices for these dues. This was attended by a very encouraging response. The matter of delinquency will be referred to later in this report.

A great deal of time has been consumed and considerable money expended during the past year in attending meetings of local, state and sectional veterinary medical associations. Owing to the fact that it is rarely possible to make more than one meeting on each trip, attendance at such meetings is relatively expensive, both as to time and money. Long trips are not possible on account of the demands of the JOURNAL, as well as important correspondence.

The meetings which have been attended are as follows:

<i>Date</i>	<i>Place</i>	<i>Purpose</i>
1922		
October	11 Detroit, Mich.	Southeastern Mich. Vet. Med. Asso.
	21 Freeport, Ill.	Legislative conference.
	31 Adrian, Mich.	Michigan-Ohio Vet. Med. Asso.
December	5-6 Chicago, Ill.	Executive Board meeting.
	Chicago, Ill.	Illinois State Vet. Med. Asso.
	Chicago, Ill.	U. S. Live Stock Sanitary Asso.
1923		
January	11-12 Itasca, N. Y.	Cornell Conference.
	15 Washington, D. C.	Conference with Dr. Mohler relative to transferring JOURNAL.
	24-25-26 Madison, Wis.	Short Course.
February	6-7 Lansing, Mich.	Mich. State Vet. Med. Asso.
	28 Toledo, Ohio.	Northwestern Ohio V. M. Asso.
March	3-4 Lansing, Mich.	Legislative conference.
April	18 Detroit, Mich.	Southeastern Mich. Vet. Med. Asso.
April	25 Boston, Mass.	Massachusetts.
May	2 New York, N. Y.	Vet. Med. Asso. of N. Y. City
	4 Detroit, Mich.	B. A. I. Vet. Asso., Mich. Division.
	15 Montreal, Can.	Conference with Local Committee.
	28 Fort Dodge, Iowa.	North Central Iowa V. M. Asso.
June	9 Little Rock, Ark.	Arkansas V. M. Asso.
	26-28 Lansing, Mich.	Michigan State V. M. Asso.
July	10-12 Champaign, Ill.	Ill. State V. M. Asso.
	23-25 Omaha, Nebr.	Missouri Valley Vet. Asso.

In attending these meetings it has been necessary to be away from the city approximately 43 days and nights; approximately 14,000 miles have been covered on these trips. The number of veterinarians who have been addressed on matters concerning our Association at the meetings attended is in the neighborhood of 1350.

EXECUTIVE BOARD ELECTIONS

One of the first matters to receive attention was the election of a member of the Executive Board in District No. 1. After considerable time was spent in an examination of the records of previous elections, and some correspondence with members of the Executive Board and former Secretary Mayo, it appeared that these Executive Board elections in the past had been held one year late. As a result of this condition, there was each year a period during which there was a vacancy on the Board, this vacancy existing from the close of the annual meeting until the election of the Board member some months later. It appeared to be the intention of our present Constitution and By-laws to provide for the election of an Executive Board member each year in advance of the annual meeting, so that the member-elect might be ready to assume his duties at the close of the annual meeting. Such being the case, instead of it being necessary to hold one Executive Board election it became necessary to hold elections in three districts, this being the year when two terms of office on the Board were due to expire, namely, in Districts Nos. 2 and 3. This will explain why it was necessary to hold elections in three districts this year. The results of these elections have been announced in the JOURNAL. Dr. George Hilton, of Ottawa, was re-elected in District No. 1; his term of office actually having expired at the close of the meeting in St. Louis last year. Dr. T. E. Munce has been re-elected in District No. 2; and Dr. David S. White, of Columbus, Ohio, has been elected to succeed Dr. S. E. Bennett of Chicago, Ill., in District No. 3. These terms expire at the close of this meeting.

Comment has already been made, in editorials in the JOURNAL, upon the apparent lack of interest in these elections. The manner of electing the members of our Executive Board has been referred to as being the most democratic feature of our organization, and it is somewhat surprising that such a large number of our members do not avail themselves of the opportunity of expressing a preference as to who shall represent them upon our Executive Board.

MULTIGRAPH PURCHASED

Shortly after moving into our new quarters, multigraphing equipment was purchased and this has proved to be a splendid investment. It has been particularly valuable in getting out letters for our resident state and provincial secretaries, in con-

nection with our campaign for new members, and I believe it is safe to say that more prospective members have been approached this year than during any year in the past. Letters have been prepared for twenty-nine of our state and provincial secretaries. The number of letters prepared was approximately 3700. In addition to preparing the letters, envelopes were addressed to the names on the lists supplied us by the various secretaries. The envelopes were stamped and forwarded with the letters and application blanks to each secretary; all that it was necessary for him to do was to sign the letters, enclose and mail them. In most instances we sent out a letter, one month later, from our office to these prospects, and at the same time mailed a sample copy of the JOURNAL. Approximately 945 sample copies of the JOURNAL have been distributed in this way.

LAPEL EMBLEMS

Acting in accordance with the instructions of the Association, an order was placed with the Jewel Die Manufacturing Company, of Chicago, for one thousand gold-filled emblems. On this order we have received 300 emblems, and up until August 25th we had received orders for only 119, although we have given considerable publicity to the fact that these emblems were available.

MEMBERSHIP DIRECTORY

There is urgent need for a new Membership Directory, none having been published since the 1920-1921 edition. The greatest demand within the Association comes from resident secretaries, while from without the railroads are responsible for the most requests. This is in connection with the solicitation of business in connection with our conventions. We have made up type-written lists, by states, and supplied these to resident secretaries. Railroads have been supplied with lists of those states served by the particular road in question. If each road sent out one letter to each name on the lists supplied, we have estimated that our members received no less than 12,782 letters relative to the Montreal convention.

Our membership is now 4005, including 38 honorary members. The new members admitted at this meeting will bring the total up to approximately 4200. The accompanying table, however, shows that we have 403 members two years in arrears with their dues, and these men are in line to be dropped from the roll in accordance with the By-laws, thirty days after notification,

State	Pd.*	D-1†	D-2‡	Total
Alabama.....	33	7	4	44
Arizona.....	6	0	1	7
Arkansas.....	19	7	3	29
California.....	127	19	8	154
Colorado.....	36	17	7	60
Connecticut.....	30	3	1	34
Delaware.....	9	0	0	9
District of Columbia.....	47	2	3	52
Florida.....	21	0	1	22
Georgia.....	25	7	11	43
Idaho.....	19	5	7	31
Illinois.....	257	54	30	341
Indiana.....	120	27	20	167
Iowa.....	187	44	38	269
Kansas.....	114	31	16	161
Kentucky.....	37	14	5	56
Louisiana.....	26	10	9	45
Maine.....	18	5	1	24
Maryland.....	39	4	2	45
Massachusetts.....	63	6	2	71
Michigan.....	113	8	8	129
Minnesota.....	88	26	20	134
Mississippi.....	21	8	8	37
Missouri.....	114	34	9	157
Montana.....	18	6	2	26
Nebraska.....	80	24	17	121
Nevada.....	7	0	1	8
New Hampshire.....	7	1	3	11
New Jersey.....	62	4	3	69
New Mexico.....	14	3	1	18
New York.....	191	23	10	224
North Carolina.....	30	6	8	44
North Dakota.....	32	2	4	38
Ohio.....	166	25	57	248
Oklahoma.....	34	17	5	56
Oregon.....	26	6	5	37
Pennsylvania.....	154	11	13	178
Rhode Island.....	4	2	1	7
South Carolina.....	19	8	1	28
South Dakota.....	33	8	5	46
Tennessee.....	25	6	1	32
Texas.....	99	16	13	128
Utah.....	14	4	0	18
Vermont.....	22	1	1	24
Virginia.....	39	7	3	49
Washington.....	29	6	6	41
West Virginia.....	21	7	1	29
Wisconsin.....	83	10	16	109
Wyoming.....	6	5	1	12
Canada.....	155	12	6	173
Alaska.....	2	0	0	2
Canal Zone.....	3	0	0	3
Cuba.....	6	0	0	6
Hawaii.....	6	1	0	7
Mexico.....	3	0	0	3
Philippines.....	24	8	3	35
Foreign.....	9	1	2	12
South America.....	3	1	0	4
	2995	569	403	3967

* indicates dues paid for 1922-23.

† indicates dues for 1922-23 not paid.

‡ indicates dues for 1921-22 and 1922-23 not paid.

RECAPITULATION

	Pd.	D-1	D-2	Total
District No. 1.....	155	12	6	173
District No. 2.....	560	56	35	651
District No. 3.....	739	124	131	994
District No. 4.....	366	77	48	491
District No. 5.....	550	141	108	799
District No. 6.....	617	158	73	848
Foreign.....	8	1	2	11
Honorary.....				38
Totals.....	2995	569	403	4005

unless part or all of their delinquency is liquidated. Every effort will be made to retain these members on the roll.

The table also shows that 569 members have not paid their dues for the current year, leaving less than three-fourths of our membership in good standing at the present time. Records are not available to show how these figures compare with previous years.

JOURNAL

I regard our JOURNAL as the most valuable property we possess, and no effort has been spared during the past six months to improve the JOURNAL wherever the need appeared. This has not been easy. It has been pointed out that ours is a very cosmopolitan organization, when we consider the great variety of fields in which veterinarians are at present engaged. It is true that the majority of our members is composed of practitioners, and these men, at least a certain number of them, who have been more outspoken than the rest, have expressed the feeling that the JOURNAL had ceased to be a practitioner's publication; that it contained little of interest to them and that they were getting very little out of it. With this thought in mind, a very strenuous effort has been made to secure for publication more papers along the particular lines in which it was believed the practitioner would be interested; and, if I may judge from the expressions of approval that have been made, in one way or another, during the past few months, I believe that the JOURNAL now comes nearer to what our practitioners would like it to be than for sometime in the past.

I have tried to point out, both by correspondence and in my addresses before various meetings, that the practitioners must feel that they have a responsibility to discharge in connection with the JOURNAL, and that they must not expect the other fellow to continue to do it all. Further, I have stressed the point

that ours is a scientific publication and that it has gained its present reputation through the quality of the scientific articles which have appeared in its pages from time to time, and that our JOURNAL is more likely to be judged favorably by professional men, other than veterinarians, by the quality of these so-called highly scientific articles which we publish.

PRACTITIONERS MUST HELP

The practitioner also must feel that he is the one to contribute a large portion of those very papers which he has expressed himself as being desirous of reading. The practitioner cannot expect the men in the laboratory, or the class-room, or the packing-house, to write articles in which the practitioner will be interested; he must hold up his end.

Our advertising pages from time to time have carried ads to which a few objections have been raised. The same thing may be said in connection with these advertisements, namely, that whereas they appear to be objectionable to a small number, the great majority expresses no opinion one way or the other. There are very few ads of biological products or medicinal remedies to which someone occasionally does not raise an objection. It should be kept in mind that the amount of advertising which it is possible to get, for a publication such as ours, is limited, and during the short time that the JOURNAL has been published under my direction, practically no effort has been put forth to secure additional advertising. It was believed that it would be better to go ahead and improve the JOURNAL and thereby secure a larger number of subscribers. Then we would be in a better position to solicit additional advertising. Plans in this direction have been formulated, and it is our intention to inaugurate a rather vigorous campaign for subscriptions within the next six months.

There follows a summarized financial statement of our JOURNAL account for a period of six months, from March to August, inclusive. This financial statement is extremely conservative and shows that we have made a little money on the JOURNAL. In the expenditures listed there is a miscellaneous item of over \$600.00 in which is included all of the office equipment which it was necessary to purchase early in the year.

I do not believe that we should attempt to regard our JOURNAL as a money-making proposition. I have felt that we should endeavor to break even, and as our revenue is increased, to put

this back in the JOURNAL in various ways. Those of you who have closely examined recent numbers of the JOURNAL have noted the increased number of illustrations which we have used, and in two of the numbers part of the JOURNAL was printed on an extra quality paper so as to be able to reproduce our half-tones better. This, of course, costs money, but it is believed that the money was well spent, and some very favorable comments have been made upon the JOURNAL in this connection.

JOURNAL FINANCIAL STATEMENT

RECEIPTS

Income from advertising, March to August, inc. (6 months).....	\$4,234.70
Income from subscriptions, March to August, inc. (6 months).....	697.52
A. V. M. A.—estimated.....	4,500.00
	<u>\$9,432.22</u>

DISBURSEMENTS

March to August, Inc.

Printing (6 issues).....	\$5,920.45
Envelopes (10 months' supply).....	184.85
Rent (6 months, one-half charged to JOURNAL).....	321.00
Half-tones (6 issues).....	241.54
Salaries (6 months).....	1,675.00
Postage (6 months).....	409.67
Miscellaneous (including office equipment).....	617.93
	<u>\$9,370.45</u>

The accompanying table gives an analysis of the material that has been published in the JOURNAL for the six months from March to August inclusive.

	Mar.	Apr.	May	June	July	Aug.	Total
Papers.....	10	9	14	10	9	5	57
Clin. & Case Reports....	1	2	2	3	1	3	12
Editorials.....	6	8	13	6	13	10	56
Reviews.....	0	0	2	0	4	2	8
Abstracts.....	0	0	5	2	3	3	13
Communications.....	2	3	3	1	6	4	19
Meetings Reported.....	17	8	7	9	6	7	54
Obituary Notices.....	11	5	8	1	5	18	48
Personals.....	27	46	43	69	56	63	304

It has been the intention to keep this report relatively free from recommendations, for a two-fold reason. Some changes in our Constitution and By-laws which appeared to be desirable were presented to the joint meeting of the Executive Board and Committee on Revision of Constitution and By-Laws, in Chicago, last December, and have already been incorporated in the proposed changes which were published in the report of this meeting, in the March number of our JOURNAL.

Insofar as recommendations concerning the policy of our Association along certain lines are concerned I may say that having been a member of the Committee on Policy, which is bringing in a report at this meeting, any suggestions regarding our policy which it appeared desirable to make have already been presented to that Committee, and my thoughts along this line are incorporated in the report of that Committee.

AMENDMENTS PROPOSED

However, brief reference will be made to a few changes which appear to be desirable in our Constitution and By-laws. The first is the manner of making application for membership and admitting new members. It is proposed that Section 6 of Article 2 of the By-laws be amended as follows:

Applications for membership shall be made upon blanks furnished by the Association, in the handwriting of the applicant, and must be endorsed by two members of the Association in good standing, one of whom must be a resident of the state, province or territory in which the applicant resides. Applications must be accompanied by the membership fee of \$5.00 and dues pro rata for the balance of the fiscal year current, as stated on the application blank. Applications must be filed with the Secretary and be examined by him for correctness and completeness as far as available information will allow. After approval by the Secretary, the latter will cause said application to be published in the official JOURNAL, as soon thereafter as possible, with name and address of applicant, college and year of graduation, and names of vouchers. If no objections shall be filed with the Secretary, as against the applicant being admitted to membership in the Association, his name shall again be listed in the next issue of the JOURNAL, and if no objections shall have been filed within thirty days after the second publication of the name of the applicant, he shall automatically become a member and shall be so enrolled by the Secretary, and membership card issued. If any objections be filed against any applicant, either on first or second notice, said application will be referred to the Executive Board for consideration.

The desirable features of this change are several. It will afford greater safety than our present procedure, insofar as the admission of undesirable members is concerned. That is to say, by posting applications for membership in our JOURNAL for sixty days, a better opportunity will be afforded than at present, for filing objections to prospective members. It will almost entirely do away with the necessity of reading a long list of applications at the annual meeting, which is a time-consuming procedure, not to mention the time consumed in Executive Board meetings in going over these applications before their presentation to the Association. In the third place, it will materially reduce the time a prospective member will have to wait for admission. Under the present procedure this may be as long as one year, in the case of those applications which are received a few days too late to be acted upon at the annual meeting.

Another change which appears desirable is in having our fiscal

year coincide with the calendar year. The present system, insofar as the payment of dues is concerned and the issuance of membership cards, is very confusing to many of our members. The present system brings the heavy work, incident to mailing out statements for dues, and the receipt of remittances and issuance of membership cards, just at a time when there is a very heavy tax upon our office incident to preparing for the annual meeting. Closely allied to this proposed change is that of having the term of office of our Treasurer end on December 31 and begin on January 1 following his election. I believe that it would be well for us to change the volumes of our JOURNAL, which now begin with the April and October numbers, to begin with the January and July numbers. There are several reasons for this: The majority of our subscriptions begin with January, which is right in the middle of a volume. Another reason is that, with the present system, the compilation of the index for the September number must be done during the latter part of August, when we are extremely busy with preparations for our annual meeting.

ACKNOWLEDGEMENTS

Your Secretary-Editor wishes to take this opportunity to make grateful acknowledgement of the generous assistance of all of the officers, committees and members who have so willingly and promptly responded to the many requests made of them in so many ways. Particularly are his thanks due to the former Secretary, Dr. N. S. Mayo, and the former Editor, Dr. John R. Mohler, without whose generous assistance and many very thoughtful suggestions it would not have been possible to have taken over the new duties and kept the affairs of the Secretary's office and the JOURNAL running smoothly and uninterruptedly. Acknowledgement is also made of the splendid cooperation given by the members of the Local Committee on Arrangements, in the perfection of the plans and the program for this splendid meeting, with a very full measure of thanks to their energetic and resourceful secretary, Dr. J. H. Villeneuve.

In concluding this report your Secretary-Editor wishes to make plain to the membership at large that the past year has been one replete with new experiences, new situations and new conditions. It is fully appreciated that mistakes have been made and it is sincerely hoped that these will become fewer and less frequent as time goes on and greater experience is acquired. When anyone directs attention to the commission of errors upon the

part of your humble servant, he will continue, as he has done in the past, to receive these in the same spirit as that in which they are offered, namely, for the good of the Association.

H. PRESTON HOSKINS.

Secretary-Editor.

REPORT OF THE REPRESENTATIVE OF THE AMERICAN VETERINARY MEDICAL ASSOCIATION TO THE NATIONAL RESEARCH COUNCIL

Your representative to the National Research Council attended the meeting of Division of Medical Sciences, in Washington, last April, at which time he reported the activity of the Abortion Diseases Committee, which was appointed jointly by the Division of Medical Science and the Division of Biology and Agriculture, this Committee consisting of C. P. Fitch, E. T. Ball and L. W. Goss.

This Committee asked the workers on abortion diseases of the Experiment Stations of the United States to meet in an informal manner during the United States Live Stock Sanitary Association meeting, at Chicago. At this meeting the various phases of this disease were discussed. The attendance exceeded the expectation of the Committee, and was representative of the East and West as well as of Central United States. At the close of the meeting it was voted that a similar meeting be held the following year. This meeting seemed to meet with the approval of a large part of those in attendance, as expressed by remarks from them at the close of the meeting. The Division of Medical Science approved the work of the Committee and reappointed the same Committee for the following year.

An effort is being made to interest the pure-bred live stock associations to give their moral support toward appropriations for the continuance of the research work upon abortion disease, as well as other diseases of live stock.

The matter of fellowships has been one of the activities of the past year, and there are indications that some of the large interests which have been taking an active part in the control of live stock diseases will, in the near future, award two fellowships for research studies in veterinary colleges.

As your representative in the past, I would like to suggest that more instructions be given to your representative to the National Research Council relative to problems which should be presented to the Council.

LEONARD W. GOSS.

REPORT OF COMMITTEE ON HISTORY
History of Veterinary Medical Science in the United States
and Canada, from its Earliest Appearance to the
Founding of the American Veterinary
Medical Association

The task assigned to your Committee on History is peculiarly difficult and inevitably slow of growth. You must realize that during two centuries following the settlement of the Atlantic seaboard there were no schools of veterinary medicine in this country, few practitioners, no veterinary societies, and very little literature of the art produced. The chief sources of information as to individual workers and their activities are the records of certain agricultural societies in Massachusetts, New Jersey, Pennsylvania, Virginia, Delaware and New York State, and early books upon agricultural matters. Up to the present time your chairman has not availed himself of his committee, for it has not appeared feasible to assign parts from a work that does not lend itself as yet to division.

I am not in a position to submit a final draft of my report to my committee and through them to you. I can assure you, however, that a great deal of work has been done, considerable valuable matter has been unearthed and that a growing familiarity with the task makes it progressively easier and more productive. I, therefore, report *progress*.

I would like to be relieved of further work on this Committee, and superceded by some one of those who think our earthly history should be written during odd moments of a few months. I will cheerfully pass to my successor what I have accumulated and aid him to the best of my ability.

JOHN W. ADAMS, *Chairman*.

TUESDAY MORNING, AUGUST 28, 1923

(Section on Education and Research)

The first session of the Section on Education and Research convened at 10:30 a. m., in the Hotel Mount Royal, Montreal, Que., Canada, Dr. L. W. Goss of Columbus, Ohio, presiding. Chairman Goss read his report. (Applause). Published in this issue (p. 9).

CHAIRMAN GOSS: We will now hear the Secretary's report.

SECRETARY PICKENS: Your Secretary has no report as such, but I want to thank the members of this Section, at this time,

for their hearty cooperation in preparing material for the Section.

CHAIRMAN GOSS: We will now proceed with the program. The first paper is "Veterinary Education and Practice in Scandinavia, with Special Reference to Norway"—Dr. H. J. Stafseth, Michigan Agricultural College, East Lansing, Michigan.

Dr. Stafseth read his prepared paper. (Applause). Paper and discussion published in this issue (p. 21).

CHAIRMAN GOSS: If that is all, we will proceed to the next number on the program, "Veterinary Education," by Dr. C. J. Marshall, University of Pennsylvania, Philadelphia.

Dr. Marshall read his prepared paper. (Applause). Paper and discussion published in this issue (p. 28).

CHAIRMAN GOSS: We will now hear the paper by Dr. F. T. Daubigny, "Veterinary Science as Taught in Quebec."

Dr. Daubigny read his prepared paper. (Applause). Paper and discussion published in this issue (p. 14).

CHAIRMAN GOSS: That concludes our program, gentlemen. We will meet tomorrow morning at nine-thirty, at a joint session. The Sanitary Science and Police and Education and Research sections will meet together in Room B on this floor.

The meeting adjourned at 12:30 p. m.

ADJOURNMENT

FRIDAY MORNING, AUGUST 31, 1923

The meeting convened at 10:00 a. m., with Chairman Goss presiding.

CHAIRMAN GOSS: The first number on the program is "The Source of Infection in Primary Outbreaks of Hog Cholera,"—Dr. I. K. Atherton, U. S. Inspector-in-Charge of Hog Cholera Work, College Park, Md.

Dr. Atherton read his prepared manuscript. (Applause). To be published in May issue.

CHAIRMAN GOSS: We will turn to the second number of the program, "Bacteria of the Genital Tract of Mares and the Semen of Stallions, and their Relation to Breeding Efficiency,"—Dr. W. W. Dimock, University of Kentucky, Lexington, Ky.

Dr. Dimock read his prepared manuscript. (Applause). Paper and discussion published in the December, 1923, issue.

CHAIRMAN GOSS: The next paper was to have been "*Bacterium Pullorum* Infection in Baby Chicks and Adult Fowls," by Dr. B. A. Gallagher, but he is not present. We will pass to the fourth number on the program, "The Pathology of Posterior

Paralysis in Pigs, by Dr. S. A. Goldberg, New York State Veterinary College, Ithaca, N. Y.

Dr. Goldberg read his paper. To be published in May issue.

Officers were then elected. When nominations were called for, Dr. Goss was nominated as Chairman of the Section, but he declined on the ground that he had served for several years and some one else ought to be given the opportunity. Dr. Atherton then nominated Dr. Kernkamp. The nomination was seconded. Upon motion of Dr. Murphey, duly seconded, it was voted to suspend the rules and dispense with balloting, and to have the Secretary cast the unanimous vote of the Section for Dr. Kernkamp.

Dr. Dimock nominated Dr. Pickens for Secretary for the coming year, and the nomination was seconded. Dr. Murphey moved, and the motion was duly seconded, that the rules be suspended, balloting be dispensed with, and that the Chairman be instructed to cast the unanimous vote of the Section for Dr. Pickens as Secretary.

It was voted, on motion of Dr. Dimock, duly seconded, that the meeting adjourn. The meeting adjourned at 12:10 p. m.

ADJOURNMENT

WEDNESDAY MORNING SESSION

(Joint Session of Sections on Sanitary Science and Police and Education and Research.)

August 29, 1923

The meeting convened at 10:05 a. m., Drs. L. W. Goss and R. C. Reed presiding jointly.

CHAIRMAN GOSS: The first paper will be, "A Study of Rabies from the Standpoint of Etiology," by Capt. R. A. Kelser, Army Medical School, Washington, D. C.

Capt. Kelser read his paper. (Applause). Paper and discussion published in the JOURNAL, March, 1924.

CHAIRMAN GOSS: We will now have the second paper on the program, "Controlled Vaccination Experiments on Cattle with *Bacterium Abortum*," by Drs. G. H. Hart, and C. M. Carpenter, University of California, Berkeley, Calif.

The paper was read by Dr. Hart. (Applause). Paper and discussion published in the JOURNAL, October, 1923.

CHAIRMAN GOSS: The next paper will be, "The Injection of Cattle with *B. Tuberculosis* (Avian) and Results of Subsequent

Tuberculin Tests," by Drs. Cecil Elder, and A. M. Lee, Wyoming Agricultural Experiment Station, Laramie, Wyo.

The paper was read by Dr. Elder. (Applause.) The paper and discussion published in the JOURNAL, January, 1924.

Dr. R. C. Reed took the chair at this point.

CHAIRMAN REED: The next paper on the program is entitled "A Sporadic Outbreak in Cattle Resembling Tetanus," by Dr. R. L. Conklin, MacDonald College, Quebec, Canada.

Dr. Conklin presented his paper. (Applause.) Paper and discussion to be published.

CHAIRMAN REED: I understand that none of the authors of the next paper is present. The title of the paper is, "Porcine Erysipelas," by Drs. Joseph W. Parker, Ashe Lockhart and J. D. Ray, Kansas City, Mo. None of these gentlemen being present, we will read the paper by title and same will be published in the proceedings.

The meeting adjourned at 1:00 p. m.

ADJOURNMENT

(To be continued)

The governor of California has been requested to enact a law that will forbid cats in the cities of the Golden State.



LARGE ANIMAL CLINIC SCENE
Veterinary Hospital, Kansas State Agricultural College

OTHER MEETINGS

OHIO STATE VETERINARY MEDICAL ASSOCIATION

The forty-first annual meeting of the Ohio State Veterinary Medical Association was held at Columbus, Ohio, January 9-10-11, 1924. The afternoon of the first day was spent in the transaction of business and receiving the reports of committees.

Thursday, January 10, was devoted entirely to the rendering of an interesting and instructive program, which was appreciated by a very good attendance. Those from outside the state who took part in the program of the first two days were: Dr. C. H. Stange, Dean of Veterinary Division of the Iowa State College of Agriculture, Ames, Iowa, also President of the A. V. M. A.; Dr. H. E. Bemis, Professor of Veterinary Surgery, Ames, Iowa; Dr. W. W. Dimock, Head of the Department of Veterinary Science, University of Kentucky, Lexington, Ky.; and Dr. H. B. Raffensperger, Zoological Division, B. A. I., Chicago, Ill.

The dinner session in the evening was a very enjoyable affair, the speakers being: Dr. H. W. Platter, Secretary of the State Medical Board; Dr. J. E. Monger, Director of Health, State of Ohio; Hon. Thad H. Brown, Secretary of State; and Mr. A. P. Sandles. Mr. Sandles, formerly Director of Agriculture of Ohio, gave a very patriotic and inspiring talk, touching intimately upon various phases of the veterinary profession.

During this session, Dr. Raffensperger, as a supplement to his paper of the afternoon, projected a film showing some very interesting facts relating to the life cycle of the round worm of swine. Proven methods of eradication and control were also clearly depicted.

On Friday, an entire day's clinic was provided at the College of Veterinary Medicine, Ohio State University. This clinic was divided into four sections, consisting of demonstrations upon cattle, swine, poultry, and small animals.

The consensus of opinion seemed to be that the nineteen hundred twenty-four meeting was a marked success.

The officers elected to serve for the ensuing year are: Dr. B. H. Edgington, Wooster, President; Dr. S. R. Craver, Youngstown, Vice-President; Dr. W. R. Hobbs, Columbus, Secretary; Dr. D. C. Hyde, Columbus, Treasurer; Executive Committee: Dr. P. T. Engard, Marysville, Dr. F. E. Anderson, Findlay, and Dr. Reuben Hilty, Toledo.

PENNSYLVANIA MILK INSPECTORS' ASSOCIATION

On January 23, 1924, a number of veterinarians of the Keystone State, all interested in the subject of milk inspection, met at Harrisburg and organized the Pennsylvania Milk Inspectors' Association. The following were present: Drs. Geo. W. Grim, E. E. Romberger, H. B. Roshon, C. W. Selemeyer, G. E. Rothenberger, T. E. Munce, R. O. Whipple, F. E. Davis, George Magee, W. S. Gimper, M. R. Derk, W. A. Ames and L. A. Klein.

Dr. George W. Grim, Milk Control Officer of Ardmore, Pa., was elected president.

The following program was presented:

"Municipal Cooperation in Milk Control," by Dr. Geo. W. Grim.

"The Bureau of Animal Industry and the Milk Inspector," by Dr. T. E. Munce.

"What Can the Milk Inspector Accomplish in his Community?" by Dr. E. E. Romberger.

G. A. DICK

BRITISH COLUMBIA VETERINARY ASSOCIATION

A meeting of the British Columbia Veterinary Association was held in Vancouver, February 15, 1924, at "Braemar," where a room was kindly provided by the British Columbia University authorities. There was a good attendance of local veterinary surgeons and, as visitors, Professors King, Davis, and Hare, together with several of the agricultural students, and Drs. Ballard and Keith, of Vancouver. The meeting was presided over by Dr. T. R. R. Hoggan.

Dr. W. D. Keith addressed the meeting on "Endemic Goitre in British Columbia," with particular reference to conditions that had existed at Pemberton Meadows. Dr. E. A. Bruce, pathologist at the Dominion Research Laboratory, at Agassiz, spoke on "The Preparation of Specimens for Laboratory Examination." Professor Davis' subject was "Mineral Feeding for Live Stock." These subjects were all fully discussed, and the discussion brought out many interesting and instructive features. Those taking part in the discussions were: Drs. Hoggan, Jervis, Bruce, Jagger, Keith, Gray, Gillam, and Professors Davis, Hare and King.

Dr. W. Graham Gillam, in moving a cordial vote of thanks to the three speakers of the evening, for their most interesting and

instructive addresses, remarked how good it was for the sister professions to meet at such meetings to exchange ideas and debate matters of equal interest, particularly those relative to public health. It was very fitting that the science of agriculture and animal husbandry should be so well represented there, as the average veterinarian's interests were linked up so closely with the agriculturist. It was sincerely hoped that there would be many more meetings of a similar character. Dr. Jagger voiced the feelings of those present when he proposed a vote of thanks to the University Faculty for the use of "Braemar." Professor King, in responding, said the Association was very welcome, and that they would be pleased to have them meet there at any time.

W. GRAHAM GILLAM, *Secretary-Registrar.*

MISSOURI VALLEY VETERINARY ASSOCIATION

The mid-annual meeting of the Missouri Valley Veterinary Association was held at St. Joseph, Mo., February 19-21, 1924. It proved to be a very entertaining and instructive meeting. Splendid interest was shown in the program, and good discussions of the papers followed their presentation.

On the first day, papers were presented on poultry practice, by Dr. W. E. Norden, of Avoca, Iowa, who is extensively engaged in poultry raising, and by Dr. Sivert Eriksen, who is Veterinarian at the Missouri State Poultry Experiment Station, Mountain Grove, Mo. Dr. Eriksen is endeavoring to stimulate the interest of practitioners in poultry practice, and offers his cooperation in making diagnoses, and sending literature to those who will ask for it.

Hog flu was discussed at length, following a good paper on this subject by Dr. W. A. Cornell, of Emerson, Nebraska. The question of differential diagnosis, in herds where cholera might exist as a complication, was thoroughly debated. It was agreed that the death rate in flu was low, and that the fatalities were the result of complications of pneumonia, due, in the opinion of some, to the presence of the hemorrhagic septicemia organism, which becomes pathogenic when the resistance of the hog is lowered by flu. The use of bacterins was favored by some and condemned by others. Dr. Cornell believed that he had obtained favorable results from the use of serum alone, in herds showing repeated and prolonged attacks.

"Stuttgart Disease of Dogs" was the title of a paper by Dr. J. V. Lacroix, of Evanston, Ill., who covered this subject very thoroughly.

In starting the program of the second day, Dr. W. J. Embree showed some new motion picture films. These were followed by two very interesting discussions on parasites. Dr. E. M. Nighbert, who is engaged by the U. S. Bureau of Animal Industry in sheep stomach-worm control work, at Queen City, Mo., presented a very interesting and practical paper dealing with this subject. A question box on parasites of animals brought out questions which required more than an hour for Dr. Maurice C. Hall, of Washington, D. C., to discuss. In his characteristic style, Dr. Hall answered the questions from the wealth of information he possesses on this subject, and points which have been puzzling to the practitioner were brought out, which proved that this method of presenting the subject was greatly appreciated by the audience.

In the afternoon, an address on "The Inter-Relation of Human and Bovine Tuberculosis," by Dr. M. P. Ravenel, Professor of Medical Bacteriology and Preventive Medicine, University of Missouri, was certainly a treat for the veterinarians in attendance. Dr. Ravenel is a very pleasant and fluent speaker, and he draws facts which prove his assertions from an extensive experience dealing with this subject. His address was highly appreciated by the veterinarians who have contributed so much to the problem of eliminating the spread of tuberculosis to human beings.

"The Commercial Veterinarian" was the title of a paper by Dr. J. H. Copenhagen, of Ralston, Nebraska, who showed that a veterinarian in commercial work could maintain a high standard in the profession, and at the same time do his part in maintaining the ethics and standards of the profession.

The question of advertising was discussed by Dr. D. M. Campbell, who reported that this subject is being given consideration by many practitioners, and is being discussed in veterinary associations over the country. Dr. C. H. Stange spoke of the publicity campaign which is being considered by the A. V. M. A. He brought out the necessity of each veterinarian so conducting his own work in his community, that he would be a good advertisement for the whole profession.

Dr. J. W. Connaway, of the University of Missouri, sent his paper, which was read by the Secretary. It was entitled "Gradu-

ate Veterinary Service for Areas not Occupied by Graduate Veterinarians." It dealt with the problem of supplying graduate veterinary service to the twenty-six counties in Missouri, which do not have a graduate veterinarian. A possible plan was suggested of giving these counties veterinarians who would have the duties of county agents as well, but a fee would be charged for actual work performed for individuals. When the field was developed, under the plan, so that practitioners could be supported in these counties, practitioners would be encouraged to locate in such districts. Dr. Connaway suggested his plan to meet the need for some form of veterinary service in these communities, and he believed it to be more constructive than to teach farmers to do their own veterinary work.

The evening of the second day, a banquet was served, and a musical program presented by the St. Joseph Glee Club and soloists. Dr. C. H. Stange showed some slides, illustrating the need for veterinary service in the Corn Belt, in connection with his address on "The Future of the Veterinary Profession." Dr. Ravenel gave a very interesting talk on "The Prolongation of Life." Several films were shown, followed by a dance, the music and hall having been furnished by the Liberty Laboratories, Jen-Sal Laboratories, and Haver-Glover Laboratories. Roses decorating the banquet table were furnished by Dr. B. W. Murphy, of St. Joseph.

The third day was devoted to a clinic. Dr. Nighbert demonstrated methods of diagnosis for stomach-worms of sheep, as well as the administration of the copper sulphate treatment. Dr. R. C. Moore demonstrated several udder operations. Dr. Eriksen exhibited specimens of poultry diseases and performed several autopsies on chickens. A tuberculin test was demonstrated, and reactors were shown. Dr. C. J. Norden demonstrated the passing of the stomach-tube in pigs, using the Juhl method.

A free lunch was served by Swift & Co. Following this, Dr. D. R. Gilles, inspector-in-charge at St. Joseph, presented a pathological exhibit, and Mr. Hall, of Swift & Co., presented a meat exhibit. The program wound up with a tour of the Swift & Co. plant.

Many remarked that this meeting was the most entertaining and instructive they had ever attended. In spite of the difficulties encountered by the Association during recent years, there are still over 500 members in good standing. Several

changes in the constitution and by-laws were adopted, the most important being the one to have only one meeting a year instead of two. There will be no meeting of the Missouri Valley Veterinary Association this summer, on account of the A. V. M.A. meeting in Des Moines, in August.

E. R. STEEL, *Secretary.*

NORTHWESTERN OHIO VETERINARY MEDICAL ASSOCIATION

The seventeenth annual meeting of the Northwestern Ohio Veterinary Medical Association was held in Toledo, Ohio, February 20, 1924. Dr. H. E. Ash, President, called the meeting to order for a business session. Officers and committees rendered reports, and a number of applications for membership were acted upon.

An election of officers resulted as follows: Dr. W. F. Wise, Medina, President; Dr. H. F. Failor, Lima, Vice-President; Dr. F. A. Lambert, Columbus, Secretary-Treasurer.

Dr. B. H. Edgington, Pathologist at the Ohio Agricultural Experiment Station, Wooster, presented a splendidly prepared paper entitled, "Experimental Deficiency Diseases." In this paper Dr. Edgington gave a comprehensive review of our present knowledge of deficiency diseases, particularly as they may be met in those animals with which the veterinarian comes in contact. Dr. Edgington distributed a chart showing the relative amounts of the various vitamins which are found in different foods.

The afternoon session was opened with an address by Dr. Alvin Broerman, Bacteriologist, Ohio State Serum Institute, Reynoldsburg, on the subject of "*Bacterium pullorum* Infection." Dr. Broerman illustrated his subject with pathological specimens showing lesions produced by the organism. He also demonstrated the technic of the agglutination test. Dr. Broerman emphasized the fact that it is now the consensus of opinion of investigators that bacillary white diarrhea infection is contracted during the first three or four days of the life of the chick, and that this important fact should be kept in mind in putting into effect any control measures in connection with the disease.

Dr. E. T. Hallman, of the Michigan Agricultural College, presented the subject of "The Relation of Evolution and Involution of the Bovine Uterus to the Reproductive Organs." Dr.

Hallman has been making a very intensive study of this subject, and his address brought out some of the important facts which have been revealed by his investigations. He illustrated his lecture with some very fine lantern slides showing the microscopic lesions of some of the conditions encountered in *Bacillus abortus* infections.

Dr. H. Preston Hoskins addressed the meeting on legislative activities of the A. V. M. A., and asked the support of the members in behalf of the several legislative measures now being placed before Congress by the A. V. M. A. Committee on Legislation. Dr. Hoskins also explained some of the features of the proposed policy for the A. V. M. A., following which the Association unanimously voted to endorse the proposed policy.

SAGINAW VALLEY VETERINARY MEDICAL ASSOCIATION

On February 27, 1924, twenty-one veterinarians met in Saginaw, Mich., and organized the Saginaw Valley Veterinary Medical Association, making the seventh local association to be organized in Michigan.

The following program was presented:

"Veterinary Organization," by Dr. W. E. Coomer, Bay City. •

"The Veterinary Profession, Present and Future," by Dr. J. E. Wurm, Pigeon.

"Poultry Diseases," by Dr. H. J. Stafseth, East Lansing.

"Veterinary Education," by Dr. Ward Giltner, East Lansing.

"Some Unusual Experiences in the Treatment of Horses and Cattle," by Dr. Judson Black, Lansing.

The papers were followed by a question box. Officers were elected as follows: Dr. J. E. Wurm, Pigeon, President; Dr. J. S. Donald, Bay City, Vice-President; Dr. W. E. Coomer, Bay City, Secretary-Treasurer.

NATIONAL ASSOCIATION OF BUREAU OF ANIMAL INDUSTRY VETERINARIANS—MISSISSIPPI VALLEY DIVISION

The regular meeting of the Mississippi Valley Division was held at St. Louis, Mo., Saturday evening, March 1, 1924, with eighteen members present. The meeting was called to order by

the President, Dr. L. C. Stewart. Minutes of the previous meeting were read and approved.

Dr. J. S. Jenison read a very instructive paper on Foot-and-Mouth Disease, and told of his experiences during a previous outbreak of this disease. A discussion of the subject followed, in which the following members participated: Drs. Surring, Bruns, Jenison, Brown, Maloney, Hartman, Pease and Walls.

At ten o'clock the meeting adjourned to meet again next month in East St. Louis, Ill.

G. H. BRUNS, *Secretary*.

NORTH LOUISIANA VETERINARY MEDICAL ASSOCIATION

Veterinarians located in the northern part of Louisiana have organized the North Louisiana Veterinary Medical Association, to meet semi-annually.

The following officers are serving the Association: Dr. H. A. Benton, Arcadia, President; Dr. B. G. Bryson, Shreveport, Vice-President; Dr. L. H. Bennett, Monroe, Secretary-Treasurer.

The next meeting will be held at Shreveport, at the hospital of Dr. B. G. Bryson, on Wednesday, May 14, 1924. An interesting program and clinic is being arranged. Veterinarians in Louisiana, Arkansas and Texas are invited to attend.

NEW YORK UNIVERSITY VETERINARY ALUMNI ASSOCIATION

Alumni of the New York College of Veterinary Surgeons, the American Veterinary College, the New York-American Veterinary College and the New York State Veterinary College at New York University assembled at the old school, 338 East 26th Street, New York City, on the afternoon of March 11, 1924, for their annual meeting.

At a short business session officers were elected, as follows: Dr. Walter G. Hollingsworth, Utica, N. Y., president; Dr. Albert N. Towner, Towners, N. Y., vice-president; Dr. Louis J. Camuti, New York City, secretary.

After the meeting the members were escorted to the Bronx Zoo, as the guest of Dr. W. Reid Blair. One of the oranges was chairman of the reception committee and came out of his cage to shake hands with the visitors. Some of the animals were fed while the veterinarians watched the process. A visit to the

reptile house concluded the trip. Sight-seeing buses conveyed the party to Cavanagh's, 260 West 23rd Street, for the banquet in the evening.

There were eighty-three present, including ladies and the following invited guests: Dr. Frank H. Miller, Dr. W. Reid Blair and Major Fred Crosselt, General Secretary of the N. Y. U. Alumni Association, all of whom made addresses. Mrs. W. Horace Hoskins was called upon to speak for the ladies. Dancing followed the banquet. The party broke up about midnight and everybody was enthusiastic over the success of the occasion.

W. G. H.

SOUTHEASTERN MICHIGAN VETERINARY MEDICAL ASSOCIATION

The annual meeting of the Southeastern Michigan Veterinary Medical Association was held in Detroit, at the Fort Shelby Hotel, Wednesday evening, March 19, 1924, with forty-one members in attendance.

The meeting was in honor of Dr. J. W. Brodie, of Pontiac, who had just rounded out forty years of service as a veterinary practitioner. Dr. Brodie was graduated from the Ontario Veterinary College, in 1884. Of his forty years in practice, the past thirty-eight have been spent in Pontiac, Mich. During a considerable part of this time, in addition to his extensive private practice, Dr. Brodie has held the position of City Meat Inspector, Pontiac having been one of the first cities in Michigan to have municipal meat inspection. Dr. Brodie has served the Michigan State Veterinary Medical Association as president, and has always been very active in association work.

A banquet was the main event of the evening. Just as the last course was being served, a large cake, in the shape of a book, appropriately inscribed and bearing forty candles, was brought in and placed before Dr. Brodie. The whole affair was a complete surprise for the honored guest, but he was equal to the occasion and thanked the members in his usual hearty manner.

Following the after-dinner speeches, the Association held a short business session for the annual election of officers, which resulted as follows: President, Dr. H. H. Sparhawk, of Detroit; Vice-President, Dr. E. E. Patterson, of Detroit, for Wayne County, Dr. L. A. Maze, of Pontiac, for Oakland County, and

Dr. L. H. Smith, of Mt. Clemens, for Macomb County; Secretary-Treasurer, Dr. H. Preston Hoskins, of Detroit.

The rabies situation was discussed by State Veterinarian Killham and a number of the Detroit practitioners. The next meeting will be held on the third Wednesday of July, and the members indicated a preference for an "open air" meeting.

H. PRESTON HOSKINS, *Secretary*.

SOUTHWESTERN MICHIGAN VETERINARY MEDICAL ASSOCIATION

The second meeting of the Southwestern Michigan Veterinary Medical Association was held in Kalamazoo, Mich., March 12, 1924, with about twenty-five in attendance. The meeting was opened with a roll-call, each veterinarian giving his name, location, college and year of graduation.

Each member was asked to report an interesting case. The first case reported was one of forage poisoning and this led others to report similar cases, with the result that a very thorough discussion of this problem followed.

Dr. W. L. Chandler, of the Michigan Agricultural College, addressed the meeting on "Parasitic Adaptation." His subject took him into many phases of parasitic life and diseases caused by parasites. Dr. Chandler reported, in a preliminary sort of way, on several new parasitocidal agents, apparently of considerable promise.

Dr. H. Preston Hoskins, Secretary of the A. V. M. A., discussed some of the current activities of the national organization, dwelling particularly on the several legislative problems now in the hands of the A. V. M. A. Committee on Legislation. Dr. Hoskins outlined what he believed to be the functions and proper fields of activities for local, state and national veterinary associations.

It was decided to hold no meeting in July on account of the close proximity of the annual meeting of the State Association.

CROPPING AN OLD CUSTOM

Cropping of ears in certain breeds of dogs is an ancient custom. Romans rounded the ears of lion-hunting dogs. The same applies to the docking of tails of dogs. There was a time when the tails of sheep dogs used to be docked, so as to give wolves less opportunity for catching hold of the dogs.

ARMY VETERINARY SERVICE

EXAMINATIONS FOR APPOINTMENT TO THE VETERINARY CORPS, REGULAR ARMY

Examinations will be held, starting June 23, 1924, to fill two vacancies in the Veterinary Corps, Regular Army.

The law states that appointment in the Veterinary Corps shall be made in the grade of second lieutenant, from reserve veterinary officers, between the ages of twenty-one and thirty years.

Candidates for appointment as Second Lieutenants in the Veterinary Corps, including those already holding reserve commissions, are required to take a *preliminary* physical, moral and professional examination. Civilians qualifying in this examination are commissioned as second lieutenants in the reserve corps and, including those already commissioned in the reserve who also qualify in this examination, are ordered to active duty under their reserve commissions, in such number as is necessary to fill existing vacancies in the regular service, for a period of approximately four months of observation and instruction at the Medical Field Service School, Carlisle Barracks, Pa., or the Army Veterinary School, Army Medical Center, Washington, D. C. At the completion of this period of instruction, they are given a *final* examination, the result of which determines their eligibility for appointment in the Regular Army.

REQUIREMENTS FOR ELIGIBILITY FOR PRELIMINARY EXAMINATION

To be eligible to take the preliminary examination, a candidate must be, on the date of the examination, a male citizen of the United States, between the ages of 21 and 29 9/12 years, and a graduate of an acceptable veterinary college legally authorized to confer the degree of Doctor of Veterinary Medicine, or its equivalent, and which requires students to have covered satisfactorily a four years' high school course or its academic equivalent, as a minimum entrance requirement, maintaining this course of instruction for a period of four years of not less than seven months in each year. With the exception of graduates of Veterinary R. O. T. C. Units, candidates must also have had, subsequent to graduation, at least one year's experience in the practice of veterinary medicine, or its equivalent in hospital

work, or as an instructor in an approved veterinary college, or as an employe of the Bureau of Animal Industry of the United States Department of Agriculture, actively engaged in veterinary professional work.

APPLICATION FOR PRELIMINARY EXAMINATION

Application blanks (Form No. 62, A. G. O.) may be obtained from the commanding officer or surgeon of any military post or station, or from the Adjutant General or the Surgeon General of the Army, Washington, D. C. No one will be examined whose application has not been approved by the Surgeon General and who does not have authority from the Adjutant General to appear before the board.

The information given in the application must include names of veterinary colleges attended, date of graduation, and satisfactory evidence of the required one year's experience in the practice of veterinary medicine or its equivalent. The application must also be accompanied by evidence of citizenship, if the applicant is of foreign birth, and by certificates, based upon personal acquaintance, from at least three reputable persons as to citizenship, character, and habits.

Examinations usually extend over a period of five days and are held at various points throughout the country. The Government does not pay any portion of the expenses of the applicant in connection with his examination, but will designate as the place of his examination the nearest practicable point to his place of residence. Applicants for examination will be notified of the place to which they should report for examination.

SCOPE OF PRELIMINARY EXAMINATION

The preliminary examination is conducted by a board ordinarily consisting of two officers of the Veterinary Corps and one officer of the Medical Corps. Candidates will be required to submit to the board a diploma conferring a degree of Doctor of Veterinary Medicine or its equivalent, or a certificate of graduation, and all other necessary documents establishing fitness for appointment.

The physical examination will conform in all respects to the standards prescribed by the War Department for officers of the Regular Army.

The examination for moral character and general fitness will include a review of the application and documents filed therewith and such additional examination and investigation as will

enable the board to form an opinion as to whether the candidates have the moral qualifications, adaptability and aptitude required for appointment.

The mental examination will be written, covering eleven subjects, each graded on the basis of a maximum of 100, with relative weights as follows: Anatomy, 12; physiology and histology, 10; materia medica and therapeutics, 8; pathology, bacteriology and parasitology, 8; meat and dairy hygiene, 11; practice of medicine, 12; obstetrics and zootechnics, 5; chemistry and physics, 4; surgery, 12; veterinary preventive medicine, including animal sanitation and management, 12; horseshoeing, 6. Proficiency in English, grammar, orthography, and composition will be determined from the candidate's examination papers.

In order to qualify, candidates will be required to attain a general average of 80 per cent in the professional and mental examination, and not less than 65 per cent in any one professional subject. Those who qualify and who are not already members of the Veterinary Officers' Reserve Corps will be immediately recommended for commissions as second lieutenants therein.

SCOPE OF FINAL EXAMINATION

At the conclusion of the period of observation and instruction, candidates will be given a final physical examination and a final qualifying examination in subjects in which they have undergone instruction, and in general aptitude for the military service. A minimum average of 80 per cent in the final examination is required to qualify for appointment in the Regular Army. Upon the completion of this examination, selected candidates will be tendered appointment as second lieutenant, Veterinary Corps, Regular Army, and those not selected will be ordered to their homes and relieved from active duty, or discharged from their commission in the Officers' Reserve Corps.

The House of Representatives voted, March 14, 1924, to appropriate one million dollars for eradicating foot-and-mouth disease in California.

Two cases of human anthrax were recently reported at Michigan City, Ind.

STATE VETERINARY EXAMINING BOARDS

MARCH 15, 1924

ALABAMA

- *A. H. French, Birmingham—President.
- *J. S. Andrade, Huntsville—Vice-President.
- *C. A. Cary, Auburn—Secretary-Treasurer.
- R. I. Kearley, Andalusia.
- *O. R. Eatman, Gadsden.

ARIZONA

- R. B. Doty, Safford—President.
- Z. S. McNese, Glendale—Secretary-Treasurer.
- H. E. Gerdes, Phoenix.

ARKANSAS

- *Hubert Shull, Texarkana—President.
- *J. H. Bux, Old State House, Little Rock—Secretary.
- W. F. Miller, Stuttgart.

CALIFORNIA

- *J. F. McKenna, 1212 Belmont Ave., Fresno—President.
- *J. L. Tyler, 120 E. Belgrave Ave., Huntington Park—Secretary.
- *M. Rosenberger, Box 105, Van Nuys—Treasurer.
- W. W. Thomas, Merced.
- *E. J. Creeley, 405 Buchanan St., San Francisco.

COLORADO

- *G. W. Dickey, Colorado Springs—President.
- *A. N. Carroll, 301 W. 3rd St., Pueblo—Secretary.
- *L. L. Glynn, Monte Vista—Treasurer.

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- *Grove W. Loveland, Torrington—President.
- *C. L. Colton, 110 N. Beacon St., Hartford—Secretary.
- *A. T. Gilyard, Waterbury.
- *Thos. Bland, Waterbury.
- *P. T. Keeley, Waterbury.

DELAWARE

- *H. P. Eves, Wilmington—President.
- *H. B. McDowell, Middletown—Secretary.
- *A. S. Houchen, Newark.

DISTRICT OF COLUMBIA

- *J. P. Turner, 918 O. St. N. W., Washington—President.
- *F. W. Grenfell, 1916 H St. N. W., Washington—Secretary.
- *D. E. Buckingham, 2115—14th St. N. W., Washington.
- *Wm. P. Collins, 2130 P St. N. W., Washington.
- *John R. Mohler, B. A. I., Washington.

FLORIDA

(No veterinary practice act).

GEORGIA

- *W. A. Scott, Columbus—President.
- Peter F. Bahnsen, State Capitol, Atlanta—Secretary.
- *W. E. White, Tifton.
- *A. G. G. Richardson, Athens.
- J. W. Salter, Dawson.

IDAHO

- Commissioner of Law Enforcement, Boise.
- *H. R. Groome, Twin Falls.
- *J. D. Adams, Boise.
- *H. H. Prestel, Emmett.

*Member of A. V. M. A.

ILLINOIS

- Superintendent, Board of Registration, Springfield.
*W. J. Martin, Kankakee.
C. O. Kroener, 2342 Calumet Ave., Chicago.
*W. A. Myers, Wenona.

INDIANA

- *E. J. Tansey, Monrovia—President.
*J. H. Mills, Russiaville—Vice-President.
*R. C. Julien, State House, Indianapolis—Secretary.

IOWA

- *Peter Malcolm, State House, Des Moines—Secretary.
E. E. Sayers, Algona.
S. H. Johnston, Carroll.

KANSAS

- *O. O. Wolf, Ottawa—President.
*B. W. Conrad, Sabetha—Secretary.
*E. F. Kubin, McPherson.

KENTUCKY

- C. Coleman, Frankfort—President.
*R. L. Pontius, Lexington—Secretary-Treasurer.
*C. A. Miller, Louisville.
*Harry Gieskemeyer, Newport.
R. B. Smooth, Madisonville.

LOUISIANA

- S. B. Staples, Alexandria—President.
*D. A. Maclean, 1233 Dryades St., New Orleans—Vice-President.
*B. G. Bryson, 1525 Pierre Ave., Shreveport—Secretary.
Paul Quilty, Lakes Charles.

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- *P. R. Baird, Waterville—President.
*M. E. Maddocks, Augusta—Secretary.
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MARYLAND

- *G. H. Grapp, Baltimore—President.
*Hulbert Young, 515 N. Charles St., Baltimore—Secretary.
*R. V. Smith, Frederick.
*Glenn W. Horner, Westminster.
*H. J. McCarthy, Arlington.

MASSACHUSETTS

- *Langdon Frothingham, 476 Beacon St., Boston—President.
*E. W. Babson, 343 Washington St., Gloucester—Secretary.
*Geo. P. Penniman, 12 Dean St., Worcester.
*T. E. Maloney, 25 N. Main St., Fall River.
*L. H. Howard, 124 State House, Boston.

MICHIGAN

- *B. A. Perry, Hastings—President.
*B. J. Killham, Dept. of Agri., Lansing—Secretary.
*E. T. Hallman, 383 Sunset Lane, E. Lansing.

MINNESOTA

- *W. L. Boyd, University Farm, St. Paul—President.
*L. Hay, Faribault—Secretary.
*C. J. Sigmond, Pipestone.
*R. R. Donaldson, Argyle.
A. F. Lees, Red Wing.

MISSISSIPPI

- *O. M. Norton, Greenville—President.
Wm. L. Gates, Clarksdale—Secretary.
*W. P. Ferguson, Grenada.
B. E. Green, Hattiesburg.
*J. A. Beavers, Canton.

MISSOURI

- J. L. Felix, Marysville—President.
D. B. Morgan, Neosho—Vice-President.
*H. A. Wilson, Jefferson City—Secretary.

MONTANA

- Howard Welch, Bozeman—President.
*C. H. Stevens, Stevensville—Vice-President.
*A. F. Baldwin, Miles City—Secretary-Treasurer.

NEBRASKA

- Secretary, Dept. of Health and Welfare, Capitol Bldg., Lincoln.
Geo. A. Young, Syracuse—President.
T. P. Rose, York—Vice-President.
*Floyd Perrin, P. O. Box 311, Lincoln—Secretary.

NEVADA

- Geo. L. Nicholas, Herington—President.
*Frank H. Baker, Gardnerville—Vice-President.
Robert Dill, Box 782, Reno—Secretary.

NEW HAMPSHIRE

- *H. M. Lewis, Nashua—President.
*Guy E. Chesley, Rochester—Secretary-Treasurer.
E. Ned Olzendam, Manchester.

NEW JERSEY

- *J. Payne Lowe, Passaic—President.
*R. W. Butterworth, 497 Ellison St., Paterson—Secretary.
*Robert E. Mosedale, Bernardsville—Treasurer.
C. E. Magill, Haddonfield.
W. F. Harrison, Stockton.

NEW MEXICO

(No veterinary practice act.)

NEW YORK

- *Geo. A. Knapp, Millbrook—President.
*Otto Faust, Poughkeepsie—Secretary.
H. S. Beebe, Albion.
*Garry T. Stone, Binghamton.
*R. W. Gannett, Brooklyn.

NORTH CAROLINA

- A. C. Jones, High Point—President.
Wm. Moore, Raleigh—Secretary-Treasurer.
*M. J. Ragland, Salisbury.
*L. J. Herring, Wilson.
R. H. Parker, Gastonia.

NORTH DAKOTA

- R. S. Amadon, Agricultural College—President.
*L. A. Benson, Grand Forks—Vice-President.
R. E. Shigley, Kenmare—Secretary.

OHIO

- *C. W. Fogle, Leipsic—President.
*F. A. Zimmer, Dept. of Agri., Columbus—Secretary.
*J. D. Fair, Millersburg.
*Norton Dock, 2824 Vine St., Cincinnati.

OKLAHOMA

- *Arthur O. Hughes, Mangum—President.
*E. W. Meads, Cherokee—Vice-President.
*D. W. Gerber, 1207 N. Broadway, Oklahoma City—Secretary.
*J. E. Nance, Okla. City Stockyards, Oklahoma City—Treasurer.
*W. F. Hall, Capitol Bldg., Oklahoma City.

OREGON

- *C. W. Lassen, Pendleton—President.
*W. H. Lytle, Salem—Secretary.
J. M. Creamer, Portland.
R. E. Hunt, Roseburg.
*E. E. Chase, City Hall, Portland.

PENNSYLVANIA

- *H. B. Cox, 1516 Snyder Ave., Philadelphia—President.
- *H. W. Barnard, 529 E. King St., Lancaster—Secretary-Treasurer.
- *C. W. Boyd, Sewickley.
- *F. H. McCarthy, Pottsville.
- *E. E. Bittles, Waterford.

RHODE ISLAND

- *Charles T. Frey, River Point—President.
- *John S. Pollard, 183 Harrison St., Providence—Secretary.
- *Thos. E. Robinson, Westerly—Treasurer.
- U. S. Richards, Woonsocket.
- C. Horseman, Newport.

SOUTH CAROLINA

- *Benj. McInnes, Charleston—President.
- *J. H. Morse, Sumter—Vice—President.
- *W. A. Barnette, Greenwood—Secretary.

SOUTH DAKOTA

- J. E. Phelps, Pierre—Superintendent.
- *C. B. Lenker, Colome.

TENNESSEE

- *F. R. Youree, Lebanon—President.
- S. H. Woods, Murfreesboro—Vice-President.
- *M. Jacob, Knoxville—Secretary.
- *W. M. Bell, Nashville—Treasurer.

TEXAS

- *P. P. Starr, Gainesville—President.
- *W. G. Brock, Dallas—Vice-President.
- *F. E. Barnes, Waxahachie—Secretary.
- *M. A. Peck, Fort Worth.
- *A. C. Burns, Cleburne.
- H. V. Goode, Clarksville.
- J. A. Harris, Bonham.

UTAH

- Director of Registration, Salt Lake City.
- *J. H. Halton, Salt Lake City.
- *H. J. Frederick, Logan.
- A. J. Webb, Salt Lake City.

VERMONT

- *Robert Weir, Rutland—President.
- *H. E. Bancroft, Barre—Vice-President.
- *Geo. Stephens, White River Junction—Secretary-Treasurer.

VIRGINIA

- *S. C. Neff, Staunton—President.
- *Thomas Fraser, 316 N. Henry St., Richmond—Secretary.
- H. S. Willis, Gordonsville.
- *W. T. Gilchrist, Norfolk.
- *H. H. Adair, Bristol.

WASHINGTON

- Director, Department of Licenses, Olympia.
- *A. R. Galbraith, Garfield.
- A. Trippeer, Walla Walla.
- P. G. McIntosh, Yakima.

WEST VIRGINIA

- *Ernest Layne, Huntington—President.
- J. C. Callander, Parkersburg—Vice-President.
- *O. C. Bradley, Fairview—Secretary.

WISCONSIN

- *J. P. West, Madison—President.
- *A. J. Abbott, Marshfield—Vice-President.
- *T. H. Ferguson, Lake Geneva—Secretary.

WYOMING

- G. H. Good, Wheatland—President.
- A. W. French, Cheyenne—Secretary.

MISCELLANEOUS

WHERE OUR VETERINARY STUDENTS COME FROM

Thinking that it might be interesting to know where our veterinary students come from, we have compiled the accompanying table, showing the distribution by states. These figures are for the college year 1922-1923. The home addresses of the 698 students have been used as the basis for the computation.

The states which are starred (*) have veterinary colleges. Canada has two. Whether the relatively large numbers of students in the states having veterinary colleges is cause or effect is open to question. Illinois, which, until a few years ago, had two colleges, is sending 24 students to other states for their veterinary education. Wisconsin and Minnesota, which never have had veterinary colleges, contribute 19 and 13 students respectively.

The seven states of New York, Iowa, Ohio, Colorado, Kansas, Pennsylvania and Michigan have 55% of the veterinary students in the United States. The six New England states have only eleven students studying veterinary medicine. Maine and Nevada have none. Nine states have only one each.

*Alabama.....	19	Nevada.....	0
Arizona.....	1	New Hampshire.....	2
Arkansas.....	2	New Jersey.....	7
California.....	8	New Mexico.....	1
*Colorado.....	43	*New York.....	75
Connecticut.....	2	North Carolina.....	2
Delaware.....	2	North Dakota.....	5
District of Columbia....	3	*Ohio.....	47
Florida.....	1	Oklahoma.....	3
*Georgia.....	27	Oregon.....	1
Idaho.....	4	*Pennsylvania.....	37
Illinois.....	24	Rhode Island.....	1
*Indiana.....	28	South Carolina.....	1
*Iowa.....	55	South Dakota.....	4
*Kansas.....	40	Tennessee.....	4
Kentucky.....	4	*Texas.....	15
Louisiana.....	11	Utah.....	4
Maine.....	0	Vermont.....	5
Maryland.....	1	Virginia.....	3
Massachusetts.....	1	*Washington.....	10
*Michigan.....	33	West Virginia.....	1
Minnesota.....	13	Wisconsin.....	19
Mississippi.....	9	Wyoming.....	4
Missouri.....	9	*Canada.....	80
Montana.....	2	Foreign.....	18
Nebraska.....	7		
		Total.....	698

DR. BROWNING TO HAWAII

Dr. P. H. Browning, of San Jose, Calif., was appointed Territorial Veterinarian of Hawaii, by the Board of Agriculture and Forestry, on February 7, 1924, filling the position which has been vacant since the death of Dr. Victor A. Norgaard several years ago.

Dr. Browning has already gone to Hawaii to take up his new work. He left California in company with Dr. Cyril Golding, of Kapoa, Kanai, Hawaii. Dr. Golding attended the California Veterinary Practitioners' Week, at University Farm, the early part of January.



DR. P. H. BROWNING

During his many years as a practitioner in California, Dr. Browning was always very active in veterinary affairs. He served the California State Veterinary Association as President, and joined the A. V. M. A. in 1907. He was Resident Secretary for California, 1909-1910, served on the Local Committee on Arrangements for the 1910 meeting in California, and was a member of the first special committee appointed by the A. V. M. A. to investigate veterinary colleges, 1912-1913. Dr. Browning is a graduate of the New York College of Veterinary Surgeons, Class of 1892, and also of the Chicago Veterinary College, 1903.

RECOGNIZED VETERINARY COLLEGES

Graduates of the following veterinary colleges in the United States and Canada are eligible to membership in the A. V. M. A.:

- Alabama Polytechnic Institute, College of Veterinary Medicine,
Dr. C. A. Cary, Dean, Auburn, Ala.
- Colorado Agricultural College, Division of Veterinary Medicine.
Dr. Geo. H. Glover, Dean, Fort Collins, Colo.
- Georgia State College of Agriculture, Division of Veterinary Medicine,
Dr. A. G. G. Richardson, Dean, Athens, Ga.
- Indiana Veterinary College,
804 East Market St., Indianapolis, Ind.
- Iowa State College, Division of Veterinary Medicine,
Dr. C. H. Stange, Dean, Ames, Iowa.
- Kansas State Agricultural College, Division of Veterinary Medicine,
Dr. R. R. Dykstra, Dean, Manhattan, Kansas.
- Michigan Agricultural College, Division of Veterinary Science,
Dr. Ward Giltner, Dean, Lansing, Mich.
- New York State Veterinary College, at Cornell University.
Dr. V. A. Moore, Dean, Ithaca, N. Y.
- Ohio State University, College of Veterinary Medicine,
Dr. David S. White, Dean, Columbus, Ohio.
- Ontario Veterinary College,
Dr. C. D. McGilvray, Dean, Guelph, Ont., Canada.
- Texas Agricultural and Mechanical College, Dept. of Vet. Med. and Surgery,
Dr. Mark Francis, Dean, College Station, Texas.
- Université de Montréal, École de Médecine Vétérinaire,
Dr. F. T. Daubigny, Director, Montreal, Que., Canada.
- University of Pennsylvania, School of Veterinary Medicine,
Dr. Louis A. Klein, Dean, Philadelphia, Pa.
- Washington State College, College of Veterinary Science,
Dr. E. E. Wegner, Dean, Pullman, Wash.

Graduates of the following institutions, no longer in existence, are eligible to membership:

- American Veterinary College.
- Chicago Veterinary College.
- Cincinnati Veterinary College.
- Columbia Veterinary College.
- Detroit Medical College, Veterinary Department.
- George Washington University, Veterinary Department.
- Grand Rapids Veterinary College.
- Harvard University, Veterinary Department.
- Kansas City Veterinary College.
- Laval University, Veterinary Department.
- McGill University, Veterinary Department.
- McKillip Veterinary College.
- National Veterinary College.
- New York-American Veterinary College.
- New York College of Veterinary Surgeons.
- New York State Veterinary College, at New York University.
- Ohio Veterinary College.
- San Francisco Veterinary College.
- Terre Haute Veterinary College.
- University of California, Veterinary Department.

Veterinarians who were graduated from the St. Joseph Veterinary College, prior to 1920, are eligible to membership in the A. V. M. A. Under Section 3 of Article 2 of the present By-Laws, graduates of the year 1920 will be eligible for membership in the

A. V. M. A. in 1925, graduates of the year 1921 will be eligible in 1926, graduates of 1922 in 1927, and graduates of 1923, in 1928.

Veterinarians who were graduated from the United States College of Veterinary Surgeons, Washington, D. C., prior to 1918, are eligible to membership in the A. V. M. A.

Veterinarians who are graduates of veterinary colleges other than those named in the foregoing lists may be admitted to membership by special action of the Association, after favorable recommendation by the Executive Board.

Veterinarians who are graduates of recognized foreign veterinary schools are eligible to membership in the A. V. M. A.

HORSEMANSHIP AT THE U. OF M.

Announcement has been made that ten lectures on the theory of horsemanship, supplemented with practical lessons, will be included in the physical education course, for freshman and sophomore women, at the University of Michigan. Examinations for credit will be given at the close of the course.

According to the Michigan Department of Agriculture, there are 29,540 horses in the upper peninsula of Michigan, as against 31,000 passenger automobiles.

COMMUNICATION

DEMODECTIC MANGE

TO THE EDITOR:-

In commenting upon the transmission of mange from animals to man, Karl G. Zwick, M.D., of Cincinnati, says in the *Journal of the American Medical Association*, 82 (6), p. 491: "Of interest, finally, is the observation that *Demodex folliculorum*, which is almost a normal inhabitant of the hair follicles of man, causes skin manifestation in the dog which, on account of the accompanying abscess formation, may terminate fatally." If this statement is correct, it would indicate that the treatment of so-called "follicular" mange in the dog should be directed toward the destruction of the bacterial rather than the animal parasite.

Will some of our able research men enlighten us on this subject?

N. S. MAYO

Chicago, Ill., March 3, 1924.

NECROLOGY

WILLIAM PRESTON SHULER

Dr. Wm. P. Shuler died at Ames, Iowa, December 24, 1923. His death is said to have been caused by an abscess in the brain. Dr. Shuler served as a second lieutenant in the Veterinary Corps, overseas, and while in the service developed an injury to one hip. In January, 1923 he was assigned by the Government, as a Federal Board student, to Iowa State College, where he was pursuing studies along the lines of bacteriology and pathology of infectious avian diseases. He was taking work for the degree of Doctor of Philosophy. In November, Dr. Shuler suddenly developed symptoms which led to his death.

Born at Hutchinson, Kansas, February 2, 1887, Dr. Shuler secured his veterinary training at the Kansas State Agricultural College, having been graduated with the class of 1910. He was granted the degree of Master of Science by the same institution two years later, majoring in bacteriology. From 1913 to 1917 he was a member of the veterinary faculty of the Oklahoma Agricultural and Mechanical College, and while at that institution was the author of numerous publications on hog cholera and other animal diseases.

Dr. Shuler joined the A. V. M. A. in 1916.

MAJOR GEORGE A. LYTLE

Major George A. Lytle died at the Walter Reed Hospital, Washington, D. C., on February 15, 1924, following several major operations for disease of the kidneys. Major Lytle's wife passed away in March, 1923. Having no children of their own, they adopted four, who survive their foster parents.

Born at Palatine, Illinois, October 24, 1871, Major Lytle was graduated from the Chicago Veterinary College in 1895, and was Professor of Meat Hygiene in this institution from 1899 to 1906 and from 1915 to 1917. He practiced for several years in Illinois and entered the Bureau of Animal Industry in 1898, serving in the meat inspection service for eight years. From 1906 to 1916 he was meat inspector for the Quartermaster Corps of the U. S. Army. He was appointed subsistence veterinarian in the U. S. Army in June, 1916, and became Captain in the National Army

in October, 1917, and Major in the regular army in 1920. Major Lytle joined the A. V. M. A. in 1917.

Major Lytle was an active christian and was a leader in promoting the welfare of his community. He was given a military burial, at Barrington, Ill., February 18th. The church was filled with mourning friends and neighbors and the chancel was banked with beautiful flowers.

Many of the older veterinarians will recall the national scandal over the meat supplied to the army during the Spanish-American War. During the World War there was inspected by the Army Veterinary Corps, under the supervision of Major Lytle, 1,779,848,621 pounds of meat. Of this 10,956,408 pounds were rejected by the inspectors. Of this great work Gen. Kiskern said, "Such comprehensive knowledge, judgment and care was used in training and directing the rapidly increasing force of meat inspectors and in the conduct of these inspections that hundreds of millions of pounds of meats were passed by them as complying with army specifications and there was no complaint as to quality or condition." Major Lytle was an expert in meat inspection and an unusually able executive who was absolutely square.

Few know what a powerful factor Major Lytle was in developing the meat inspection of the army and placing it upon the present high plane or of the "battles royal" he had with some army officers who held to the old order of things. Major Lytle won these contests because he was sure of his ground and right.

While Major Lytle appeared to be in robust health, his condition had been serious for a long time. His most intimate friends never received from him the faintest impression that he was ill. He was always an optimist and always cheerful. In the last few months of his life he underwent several major operations, when it "was only a breath 'twixt life and death," yet each time he faced the Grim Reaper with a smile and a joke, and in this spirit he entered the Great Beyond. *Adios amigo valiente.*

N. S. M.

B. H. MERCHANT

Dr. B. H. Merchant, of Little Rock, Ark., died March 8, 1924. Death was due to heart trouble following an attack of acute illness.

Born at Pompey Center, N. Y., April 29, 1868, Dr. Merchant attended high school and was graduated from the Ontario Veter-

inary College with the class of 1890. He married Miss Ida L. Brown, March 6, 1906. She survives him, with two children.

Dr. Merchant jointed the A. V. M. A. in 1917. He was a member of the Arkansas Veterinary Association, having served as its President, 1917-1918.

ANGUS W. DEADMAN

Dr. A. W. Deadman, of Marquette, Mich., died March 1, 1924, in Rochester, Minn., at the age of 64.

Dr. Deadman was one of a family of eight sons, all but one of whom were veterinarians. His father and grandfather were veterinarians before him. Five of his seven brothers survive him. The four veterinarians are: Drs. B. B. Deadman and Richard H. Deadman, of Alpena, Mich.; John F. Deadman, of Sault Ste. Marie, Mich.; and Charles A. Deadman, of Madison, Wis. He also leaves a widow, a daughter, one son and a sister.

Few residents of the Upper Peninsula of Michigan were more favorably known than Dr. Deadman. He enjoyed an extensive practice, was a noted horseman, took a deep interest in the County Fair, was an officer of the County Agricultural Society, a director of the Upper Peninsula Development Bureau, and a member of the County Board of Supervisors.

Dr. Deadman was an ardent advocate for the conservation of wild life. He was also deeply interested in securing a better system of logging timber, believing the old system wrong and criminally wasteful. On one occasion he was delegated by the Upper Peninsula Development Bureau to go to the State of Maine, for the purpose of studying their methods for utilizing cut-over pine lands for the growing of blueberries. His report was so comprehensive and the details were so plain that many land owners in the Upper Peninsula are at the present time experimenting with the growing of blueberries.

Born and raised on a farm, Dr. Deadman always had a sympathetic attitude toward agriculture. A lover of animals and all outdoors, he in turn was respected and admired by all who knew him. He worked consistently to get Marquette County lined up for county tuberculosis eradication work. He was largely responsible for having his city adopt a milk ordinance, giving Marquette the honor of being the first city in the Upper Peninsula to have a system of milk inspection. Dr. Deadman at all times tried to be a useful citizen, and the record he has left is worthy of emulation by all veterinarians.

A. I. JONES

Dr. A. I. Jones died at Clarksdale, Miss., Jan. 13, 1924, following an illness of nine weeks. Death was due to Bright's disease. Dr. Jones was born in Barbadoes, B. W. I., Sept. 1, 1875 and located in Clarksdale about seven years ago. He was graduated from the United States College of Veterinary Surgeons in 1910.

MARRIAGES

Dr. Charles W. Selemeyer, of York, Pa., to Miss Edna F. Breneman of Millersville, Pa., at York, Pa., Nov. 15, 1923.

Dr. Emmett H. Marquardt, of Bloomington, Ill., to Miss Jessie Mills, of Columbus, Ohio, November 29, 1923.

Dr. Harry C. Harthill, of Louisville, Ky., to Miss Ida Warren, also of Louisville, December 4, 1923.

Dr. David Leffler, of New York City, to Miss Cecelia Smolin, also of New York, December 23, 1923.

BIRTHS

To Dr. and Mrs. Derwin W. Ashcraft, of Columbus, Ohio, a son, James Bliss, Sept. 21, 1923.

To Dr. and Mrs. F. W. Chamberlain, of East Lansing, Mich., a daughter, Marian, March 8, 1924.

To Dr. and Mrs. Frank K. Hansen, of Marquette, Mich., a son, Howard Gale, March 10, 1924.

PERSONAL

Dr. J. L. Hiday (Ind. '03), formerly of Indianapolis, is now located at Fortville, Ind.

Dr. Newland J. Ayers (Ind. '20) has changed locations, from Hartwell, Ga., to Green, S. C.

Dr. R. A. Telford (St. Jos. '17) gives us his new address as 1307 Atchison St., St. Joseph, Mo.

Dr. L. H. Batchelder (U. P. '18) is assisting Dr. H. J. Little in his practice at Williamsport, Pa.

Dr. Lenard R. Twete (O. S. U. '22) has been elected City Dairy Inspector of Thief River Falls, Minn.

Dr. J. E. Salsbury (K. C. V. C. '14), formerly at Menno, So. Dak., has located at Charles City, Iowa.

Dr. S. D. Brimhall (U. P. '89) has been elected a director of the Chamber of Commerce of Covert, Mich.

Dr. William A. Cawley (U. P. '21) has been appointed a Second Lieutenant in the Veterinary Officers' Reserve Corps.

Dr. Edward Lapple (Cinn. '11) has been transferred from Ogden, Utah, to Fort Dodge, Iowa, on virus-serum control work.

Dr. M. G. Smith (K. S. A. C. '08), formerly of Norfolk, Va., has taken over the practice of Dr. S. W. Haigler, at Bellflower, Ill.

Dr. Lynn H. Tripp (Corn. '19) has been transferred from Raleigh, N. C., to Albany, N. Y., on tuberculosis eradication work.

Dr. H. Jensen (Chi. '00), of Jen-Sal Laboratories, Kansas City, has been taking an extended business trip through the West.

Dr. C. P. Branigan (Chi. '07) has been transferred from Chicago, Ill., to Des Moines, Iowa, on tuberculosis eradication work.

Dr. B. F. Kaupp (K. C. V. C. '94), of West Raleigh, N. C., is Secretary-Treasurer of the North Carolina Poultry Association.

Dr. Myron V. Springstun (K. C. V. C. '16) has been transferred from Tallahassee, Florida, to Salt Lake City, Utah, on field work.

Dr. J. B. Clancy (Chi. '92) has been transferred from Jacksonville, Ill., to National Stock Yards, Ill., on meat inspection work.

Dr. James F. Mitchell (Corn. '11) is now in South America. His address is c/o Cerro de Pasco Copper Corporation, Oroya, Peru.

Dr. H. T. D. Lackie (Chi. '15) has been transferred from Jefferson City, Mo., to Lincoln, Nebr., on tuberculosis eradication work.

Dr. Septimus Sisson (Ont. '91), of Columbus, Ohio, who has been seriously ill for several months, is reported to be recovering slowly.

Dr. R. Parker (K. S. A. C. '19), who has been practicing at Douglas, Kans., has accepted a position with the United Serum Company.

Dr. George C. Newberg (K. C. V. C. '06) has been transferred from Kansas City, Kansas, to Madison, Wis., on meat inspection work.

Dr. Clarence A. Milner (K. C. V. C. '09) has been transferred from Sioux City, Iowa, to San Diego, Calif., on meat inspection work.

Dr. Z. C. Boyd (K. C. V. C. '07) has been transferred from Columbus, S. C., to Baton Rouge, La. Address: 603 Roumain Bldg.

Dr. A. A. Husman (Cinn. '17) has been transferred from Jacksonville, Florida, to Raleigh, N. C., on tuberculosis eradication work.

Dr. David S. White (O. S. U. '90) has been elected president of the newly organized University Faculty Club, at Ohio State University.

Dr. H. Tornow (K. C. V. C. '09), of Wichita, Kans., has received a commission as Captain, in the Veterinary Officers' Reserve Corps.

Dr. Gerald F. O'Malley (O. S. U. '23) holds a position as assistant in the Massachusetts State Antitoxin Laboratory, at Clinton, Mass.

Dr. Calvin S. Evans (Chi. '03) has been transferred from Charleston, W. Va., to Tallahassee, Florida, on tuberculosis eradication work.

Dr. C. W. Olson (Ont. '22) has been transferred from South St. Paul to Tracy, Minn. He gives his new address as 650 Fourth Street.

Dr. A. R. Zumwalt (Iowa '08) has been transferred from National Stock Yards, Ill., to California, on foot-and-mouth disease eradication.

Dr. John W. Hermann (Cinn. '13), on tick eradication work for the B. A. I., has been transferred from Windsor, N. C., to Williamston, N. C.

Dr. Adolfo A. Alvarez, (U. P. '17) has been appointed Professor of Veterinary Science in the University of Porto Rico, at Mayaguez, P. R.

Dr. W. R. Scott (K. C. V. C. '12) has been transferred from Chicago to St. Louis. He is living at 3317 Cambridge Avenue, Maplewood, Mo.

Dr. Emil Krenek (K. C. V. C. '16) has been transferred from Morristown, Tenn., to Richmond, Va., on meat inspection work for the B. A. I.

Lt. J. L. Hartman (U. P. '17) is now on duty in the Veterinary Section of the Army Laboratories, at the Army Medical School, Washington, D. C.

Dr. John P. Turner (U. P. '90), of Washington, D. C., has been promoted to the rank of Lieutenant Colonel, in the Veterinary Officers' Reserve Corps.

Dr. J. E. Gibson (Ind. '04) has been placed in charge of hog cholera control and tuberculosis eradication work in Indiana, with headquarters at Indianapolis.

Dr. F. N. Steel (Ind. '00), of Muskegon, Mich., spent the winter in Florida. He reports the weather there was much more balmy than around the fox ranches of Muskegon.

Dr. E. R. Forbes, formerly State Veterinarian of Texas, has accepted a position with Parke, Davis & Company, and will look after their veterinary interests in Southern territory.

Dr. A. S. Shealy (Iowa '03), who has been in the Philippines for a number of years, expects to return to the United States in the near future. He will make Augusta, Georgia, his headquarters.

Dr. Kendall E. Merlau (M. A. C. '23), who has been practicing at Portland, Mich., has accepted a position with the Michigan Department of Agriculture and is stationed at the Detroit Stockyards.

Dr. R. F. Blatchford (M. A. C. '22), who has been stationed in Detroit, on post-mortem work, for the Michigan Department of Agriculture, has been transferred to field work in the Upper Peninsula.

Dr. J. G. Taylor (Gr. Rap. '14), of Marlette, Mich., recently spent two weeks in Detroit studying municipal meat inspection methods, as carried out by the veterinary staff of the Detroit Department of Health.

Dr. J. C. Flynn (K. C. V. C. '10), the canine specialist of Kansas City, accompanied by Mrs. Flynn, took a trip to Cuba, after attending the Practitioners' Short Course, at Auburn, Ala., in February.

Dr. Walter G. White (U. P. '09), of Lansdowne, Pa., has been appointed a Major in the Veterinary Officers' Reserve Corps, and assigned to Veterinary General Hospital No. 1, as Chief of Professional Service.

Dr. R. S. Christman (San. Fran. '17), of Marysville, Calif., recently passed the examinations for admission to the bar in the Golden State, and just as soon as he can dispose of his veterinary practice and hospital will take up the practice of law.

